

1447

Clark University Bulletin

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HISTORICAL NOTE

Clark University owes its existence to the interest in higher education of Jonas Gilman Clark, who was born at Hubbardston, Worcester County, Massachusetts, February 1, 1815. Conscious of the meagerness of his own early educational opportunities, he devoted his later years to the establishment and nurture of the institution which bears his name. In this he was ably assisted by his wife, Susan W. Clark, and by prominent citizens of Worcester. Mr. Clark died at Worcester on May 23, 1900.

The charter of the University was granted by the General Court of Massachusetts in 1887. The Graduate School, with Granville Stanley Hall as president, received its first students in 1889. Special provision was made in Mr. Clark's will for the establishment of a collegiate Undergraduate School with its own president but under the same general control as the Graduate School. Carroll Davidson Wright was chosen president of the Undergraduate School and students were first received in October 1902. After the death of President Wright in 1909, Edmund Clark Sanford, then Professor of Psychology in the Graduate School, was chosen as his successor.

In June 1920, following the resignation of President Hall after thirty-two years of service in the Graduate School and of President Sanford of the College, the Trustees announced the election of Wallace Walter Atwood to the presidency of both the Graduate and the Undergraduate Schools of the University.

During the academic year 1920-21 the two faculties continued their separate organizations while plans for unification were being worked out. These plans, approved by the Board of Trustees, went into effect in 1921-22 and provided for the fusion of the two faculties into a single body.

With the reorganization of the University, provision was made for the establishment of a Graduate School of Geography, and in the fall of 1921 work in that school was begun. Plans for the development of the School of Geography involve the organization of a complete staff of specialists in the various fields of geographical research. (See detailed announcement on Page 47).

A Summer School with a six weeks' session has been conducted each year, beginning in 1921.

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CALENDAR

1922

SEPT. 20 Wednesday
 OCT. 12 Thursday
 NOV. 30 Thursday }
 DEC. 2 Saturday }
 DEC. 23 Saturday }
 JAN. 2 Tuesday }

Academic year began
 Columbus Day
 Thanksgiving Recess
 Christmas Recess

1923

FEB. 1 Thursday
 FEB. 5 Monday
 FEB. 22 Thursday
 APR. 2 Monday }
 APR. 7 Saturday }
 APR. 19 Thursday
 MAY 30 Wednesday
 JUNE 11 Monday
 JULY 2 Monday }
 AUG. 10 Friday }
 SEPT. 19 Wednesday
 OCT. 12 Friday
 NOV. 29 Thursday }
 DEC. 1 Saturday }
 DEC. 24 Monday }

Founder's Day*
 Second Semester began
 Washington's Birthday
 Spring Recess
 Patriots' Day
 Memorial Day
 Commencement Day
 Summer School
 Academic year begins
 Columbus Day
 Thanksgiving Recess

1924

JAN. 1 Tuesday }
 FEB. 1 Friday
 FEB. 4 Monday
 FEB. 22 Friday
 APR. 7 Monday }
 APR. 12 Saturday }
 APR. 19 Saturday
 MAY 30 Friday
 JUNE 16 Monday

Christmas Recess
 Founder's Day*
 Second Semester begins
 Washington's Birthday
 Spring Recess
 Patriots' Day
 Memorial Day
 Commencement Day

*Not a holiday.

BOARD OF TRUSTEES

A. GEORGE BULLOCK (1901)	Worcester, Mass.
FRANCIS H. DEWEY (1904), Vice-President and Treasurer	Worcester, Mass.
HERBERT PARKER (1907)	South Lancaster, Mass.
ARTHUR P. RUGG (1910)	Worcester, Mass.
CHARLES H. THURBER (1913), President	Boston, Mass.
ALFRED AIKEN (1919)	Worcester, Mass.
GEORGE H. MIRICK (1920), Secretary	Worcester, Mass.
STEDMAN BUTTRICK (1920)	Concord, Mass.

FINANCE COMMITTEE

A. GEORGE BULLOCK
 FRANCIS H. DEWEY
 CHARLES H. THURBER

Final authority in all matters pertaining to the University is lodged in the Board of Trustees by charter granted by the General Court of the Commonwealth of Massachusetts.

ADMINISTRATIVE OFFICERS

President of the University	W. W. ATWOOD
Librarian and Curator of the Art Collection	L. N. WILSON
Dean of the Collegiate Department	H. P. LITTLE
Director of the Summer School	C. B. RANDOLPH
Registrar and Secretary of the Graduate Board	C. E. MELVILLE
Assistant to the President	W. A. AVERILL
Bursar	FLORENCE CHANDLER

Faculty

Other Officers and Assistants

WALLACE WALTER ATWOOD, PH.D. 160 Woodland St.
President, and Professor of Physical and Regional
Geography, 1920-.

B. S., University of Chicago, 1897; Ph.D., 1903; Fellow, assistant, and Associate, 1899-1903; Instructor and Assistant Professor of Physiography and General Geology, 1903-10; Associate Professor, 1910-13. Instructor at Lewis Institute, Chicago, 1897-99. Instructor at Chicago Institute, 1900-01. Professor of Physiography, Harvard University, 1913-20. Geologist, U. S. Geological Survey; Fellow, American Academy of Arts and Sciences; Member of the Geological Society of America and the Association of American Geographers; President of the National Council of Geography Teachers, 1920-21.

GRANVILLE STANLEY HALL, PH.D., LL.D. 156 Woodland St.
President of the University and Professor of Psychology, 1888-1920. Professor Emeritus, 1920-.

WILLIAM EDWARD STORY, PH.D. 17 Hammond St.
Professor of Mathematics, 1889-1921. Professor
Emeritus.

LOUIS N. WILSON, LITT.D. 11 Shirley St.
Librarian, 1889-. Custodian of the Art Collection.
Litt.D., Tufts College, 1905.

EDMUND CLARK SANFORD, PH.D., SC.D., LL.D. 21 Algonquin Rd.
Professor of Psychology and Education.

Instructor in Psychology, 1889-92; Assistant Professor, 1892-1900; Professor of Experimental and Comparative Psychology, 1900-09; Lecturer on College Administration, 1909-20; Professor of Psychology and Education, 1920-.

Professor of Psychology, Clark College, 1903-07; President, 1909-20.

A. B., University of California, 1883; LL.D., 1912. Fellow in Psychology, Johns Hopkins University, 1887; Ph.D., 1888; Instructor in Psychology, 1888; Fellow by Courtesy, 1920-21; Sc.D., Hobart College, 1909.

ARTHUR GORDON WEBSTER, PH.D., ScD., LL.D. 85 William St.

Professor of Physics. Director of Physical Laboratories.

Docent in Physics, 1890-92; Assistant Professor, 1892-1900; Professor, 1900.

Professor of Physics, Clark College, 1902-07.

A. B., Harvard University, 1885; Instructor in Mathematics, 1885-86; Parker Fellow, 1886-89. Student, Universities of Berlin, Paris, Stockholm, 1886-90; Ph.D., University of Berlin, 1890. Sc.D., Tufts College, 1905. LL.D., Hobart College, 1908. Member of the National Academy of Sciences; Resident Fellow of the American Academy of Arts and Sciences; Member of the American Philosophical Society; Fellow of the American Institute of Electrical Engineers; Fellow of the Institute of Radio Engineers; Member of the American Society of Mechanical Engineers; Member of the Naval Consulting Board of the United States; Honorary Member of the Royal Institution of Great Britain.

HENRY TABER, PH.D.

2 Pleasant Pl.

Professor of Mathematics, 1903-21, Professor Emeritus.

WILLIAM HENRY BURNHAM, PH.D.

767 Main St.

Professor of Education and School Hygiene.

Docent in Pedagogy, 1890-92; Instructor, 1892-1900; Assistant Professor, 1900-06; Professor, 1906.

A. B., Harvard University, 1882. Instructor in Wittenberg College, 1882-83. Instructor, State Normal School, Potsdam, N. Y., 1883-85. Fellow, Johns Hopkins University, 1885-86; Ph.D., 1888; Instructor in Psychology, 1888-89.

BENJAMIN SHORES MERIGOLD, PH.D.

166 Woodland St.

Professor of Chemistry.

Instructor in Chemistry, 1905-12, 1916-20; Professor, 1920.

Assistant Professor of Chemistry, Clark College, 1903-08; Professor, 1908-20.

A.B., Harvard University, 1896; A.M., 1897; Ph.D., 1901; Assistant in Chemistry, 1896-1900. Instructor in Chemistry, Worcester Polytechnic Institute, 1900-03.

FRANK BLAIR WILLIAMS, PH.D.

941 Main St.

Professor of Mathematics. 1920-

Assistant Professor of Mathematics, Clark College, 1907-08; Professor, 1908-20.

C.E., University of Missouri, 1890; M.S., 1893; Teaching Fellow, University of Missouri, 1892-93. Engineering Work, United States Government Surveys, 1890-92 and 1894. United States Assistant Engineer, 1895-97. Scholar and Fellow in Mathematics, Clark University, 1897-1900; Ph.D. (Clark), 1900. Assistant Professor of Engineering, Union College, 1900-04; Professor of Engineering Mathematics, Union College, 1904-07.

GEORGE HUBBARD BLAKESLEE, PH.D. 21 Downing St.
Professor of History and International Relations.

Instructor in History, 1905-11; Professor, 1911-.

Instructor, Clark College, 1903-04; Assistant Professor, 1904-09; Professor, 1909-20.

A. B. Wesleyan University, 1893. Graduate Student, Harvard University, 1898-1901; Parker Fellow, 1901-02; A.M., 1900; Ph.D., 1903. Student, Johns Hopkins University, 1893-94; Universities of Berlin, Leipzig, and Oxford, 1901-03. Member of the Commission of Inquiry to prepare data for the United States Delegation to the Peace Conference, 1918-19. Member of the Council of the American Antiquarian Society. Member of Technical Staff, American Delegation, Conference on Limitation of Armament, Washington, 1921-22.

CHARLES BREWSTER RANDOLPH, PH.D. 10 Otsego Rd.
Professor of German, 1920-. Director of the Summer School.

Instructor in Greek, Clark College, 1903-04; Instructor in Greek and Latin, 1904-05; Assistant Professor, 1905-10; Professor of Latin, 1910-18; Professor of Latin and German, 1918-20.

A.B., Wabash College, 1896; Tutor in Classics, 1896-97. Graduate Student, Harvard University, 1901-03; A.M., 1902; Ph.D., 1905. Instructor in Greek and Latin, University of Illinois Preparatory School, 1897-1900. Student, University of Halle, 1900-01.

PHILIP HUDSON CHURCHMAN, PH.D. 20 Institute Rd.
Professor of Romance Languages, 1920-.

Assistant Professor of Romance Languages, Clark College, 1908-11; Professor, 1911-20.

A.B., Princeton University, 1896; A.M., 1903; Instructor in French, 1900-04. Master, Chestnut Hill Academy, Philadelphia, 1897-99. Student, Universities of Paris and Grenoble, 1899-1900. Student, University of Paris, 1903-04. Instructor in French and Spanish, United States Naval Academy, 1904-05. Graduate Student, Harvard University, 1905-08; Instructor in Romance Languages, 1906-08; Ph.D., 1908. Visiting Lecturer in the University of Chicago, Summer Quarter, 1912.

HAVEN DARLING BRACKETT, PH.D. 114 Woodland St.
Professor of the Greek and Latin Languages and
Literatures, 1920-.

Instructor in Greek and Latin, Clark College, 1904-06; Assistant Professor, 1906-10; Assistant Professor of Greek, 1910-12; Professor of Greek, 1912-15; Professor of the Greek Language and Literature, 1915-20.

A.B., Amherst College, 1898. Master in Greek, Mercersburg Academy (Pennsylvania), 1898-99. Master in Greek, Lake Forest Academy (Illinois), 1899-1900. Sub-master, Boston Latin School, 1900-01. Graduate Student, Harvard University, 1901-04; Ph.D., 1904; Assistant in Ancient History, Harvard University, and Lecturer in Greek History, Radcliffe College, 1903-04.

CHARLES A. KRAUS, PH.D. 11 Downing St.
Professor of Chemistry and Director of the Chemical
Research Laboratories, 1914-.

B.S., University of Kansas, 1898. Fellow in Physics, Johns Hopkins University, 1899-1900. Instructor in Physics, University of California, 1901-04. Research Assistant, Massachusetts Institute of Technology, 1904-08; Ph.D., 1908; Research Associate, 1908-12; Assistant Professor of Physical Chemical Research, 1912-14.

LEROY ALLSTON AMES, A. M. 166 Woodland St.
Professor of English Literature, 1920-.

Instructor in English Literature, Clark College, 1908-10; Assistant Professor, 1910-15; Professor, 1915-20.

A.B., Harvard University, 1896; Assistant in English 1899-1900; Graduate Student, 1899-1901; A.M., 1901. Teacher of English, Browne and Nichols School, Cambridge, Mass., 1896-99. Teacher of English, Worcester English High School, 1901-06; Noble and Greenough School, Boston, Mass., 1906-07.

HARRY ELMER BARNES, PH.D. 21 Shirley St.
Professor of the History of Thought and Culture.

Assistant Professor of History, 1918-19; Professor, 1920-.

Associate Professor of History, Clark College, 1918-19.

A.B., Syracuse University, 1913; A.M., 1914; Instructor in Historical Sociology, 1913-15. University Fellow in Historical Sociology, Columbia University, 1915-16; William Bayard Cutting Traveling Fellow in the History of Thought and Culture, 1916-17; Lecturer in Modern European History, 1917-18; Ph.D., 1918. Research work at Harvard University, 1916-17. Historian to the New Jersey Prison Inquiry Commission, 1917, and to the Pennsyl-

vania Penal Commission, 1918. Professor of History, New School for Social Research, 1919-20; Lecturer in American History, 1923; Professor of History in Summer Sessions, University of Montana, 1919; University of Oregon, 1920; University of California, 1923.

LORING HOLMES DODD, PH.D. 20 Sagamore Rd.
Professor of Rhetoric, 1920-.

Instructor in English, Clark College, 1910-13; Assistant Professor, 1913-16; Associate Professor, 1916-20.

A.B., Dartmouth College, 1900. A.M., Columbia University, 1901. Ph.D., Yale University, 1907. Instructor, Choate School, Wallingford, Conn., 1901-02. Instructor in English, St. Paul's School, Garden City, N. Y., 1907-10.

ROBERT HUTCHINS GODDARD, PH.D. 5 Bishop Av.
Professor of Physics. Associate Director of Physical Laboratories.

Student in Physics, 1908-09; Fellow, 1909-11; A.M., 1910; Ph.D., 1911; Honorary Fellow, 1911-12, 1914-15, 1919-20; Instructor in Physics, 1916-18; Professor and Associate Director of Physical Laboratories, 1920-.

Instructor in Physics, Clark College, 1914-15; Assistant Professor, 1915-19; Associate Professor, 1919-20.

B.S., Worcester Polytechnic Institute, 1908; Instructor in Physics, 1908-09. Research Instructor in Physics, Princeton University, 1912-13. Director of Research under U. S. Signal Corps, Worcester Polytechnic Institute and Mt. Wilson Observatory, 1918.

GEORGE FREDERICK WHITE, PH.D. 38 Somerset St.
Professor of Organic Chemistry.

Docent in Biological Chemistry, 1913-15; Instructor, 1915-20; Associate Professor of Organic Chemistry, 1920-21; Professor, 1921-.

Instructor in Organic Chemistry, Clark College, 1912-13; Assistant Professor, 1913-18; Associate Professor, 1918-20.

S.B., Massachusetts Institute of Technology, 1906; Assistant in Analytical and Organic Chemistry, 1906-08. Fellow, Johns Hopkins University, 1909-10; Ph.D., 1910. Associate Professor of Chemistry, Richmond College, 1910-12.

HOMER P. LITTLE, PH.D. 6 Woodbine St.
Professor of Geology, Collegiate Dean, 1922-.

A.B., Williams College, 1906. Ph.D., Johns Hopkins University, 1910; Fellow, 1910. Instructor and later Professor of Geology, Colby College, 1910-20. Lecturer in Geology, Bangor Theological Seminary, 1913, 1916, 1919. U. S. Geological Survey, 1907. Mary-

land Geological Survey, 1908-10. Instructor, Johns Hopkins Summer School, 1921. Executive Secretary, Division of Geology and Geography of the National Research Council, 1920-22.

ELLEN CHURCHILL SEMPLE, A. M. 941 Main St.
Acting Professor of Anthropogeography, 1922.

Professorial Lecturer in Anthropogeography, 1921-22.

A.B., Vassar College, 1882; A.M., 1891. Student Leipzig University, 1891-92, 1895. Lecturer, University of Chicago between 1906-1923. Lecturer at School of Geography, Oxford University, England, summer terms 1912, and 1922. Ex-President, Association of American Geographers. Gold Medalist of American Geographical Society.

LAWRENCE MARTIN, PH.D. 166 Woodland St.
Acting Professor of Political and Historical Geography.
1922-23, first Semester.

A.B., Cornell University, 1904; Ph.D., 1913; A.M., Harvard University, 1905; Assistant Instructor, Assistant Professor and Associate Professor of Physiography and Geography, University of Wisconsin, 1905-17; Gilman Memorial Lecturer in Geography, Johns Hopkins University, 1920-21; Lecturer in Geography, School of Foreign Service, Georgetown University since 1921; Geographer, Institute of Politics, Williamstown, Mass., 1921-22. Member of Association of American Geographers, Geological Society of America, Geographical Societies of Vienna, of Hungary, and of Philadelphia; Gold Medalist, Société de Géographie de Paris; member of International Committee on Glaciers; attached to American Commission to Negotiate Peace, 1918-19; Member of U. S. Geographic Board; Officer of Department of State since 1920.

ALFRED LEWIS PINNEO DENNIS, PH.D. 166 Woodland St.
Acting Professor of International Relations. 1923
Second Semester.

A.B., Princeton, 1896. Student, Columbia, Heidelberg, and Harvard Universities, 1896-1901; Ph.D., Columbia, 1901. Instructor and Professor of History and Political Science, Bowdoin College, 1901-04. Associate Professor of History, University of Chicago, 1904-05; Lecturer in History, Harvard University, 1905-06; Professor of History, University of Wisconsin, 1906-20.

Captain, Military Intelligence Division, General Staff, 1918-19. Assistant Military Attaché, American Embassy, London, reporting to Peace Conference, Paris, 1919. Awarded British Military Cross.

CAREY EYSTER MELVILLE, A. B.

16 Isabella St.

Associate Professor of Mathematics. Registrar. Secretary of the Graduate Board, 1922-.

Honorary Fellow in Mathematics, 1906-15; Associate Professor, 1920-22.

Assistant in Mathematics, Clark College, 1906-09; Instructor, 1909-10; Instructor in Mathematics and Physics, 1910-11; Assistant Professor, 1911-14; Assistant Professor of Mathematics, 1914-18; Associate Professor, 1918-20; Registrar, 1914-22.

A.B., Northwestern University, 1901. Instructor in Mathematics, Academy of Northwestern University, 1901-02. Graduate Student, Johns Hopkins University, 1902-03. Instructor in Mathematics, Case School of Applied Science, 1903-06.

CHARLES FRANKLIN BROOKS, PH.D.

209 Lovell St.

Associate Professor of Meteorology and Climatology, 1921-.

A.B., Harvard University, 1911; A.M., 1912; Ph.D., 1914. Research assistant, Blue Hill Observatory, 1912-13; Assistant in Meteorology and Physical Geography, 1913-14. Assistant and Collaborator in Farm Management, United States Department of Agriculture, 1914-18. Instructor in Geography, Yale University, 1915-18. Instructor in Meteorology, United States Signal Service, 1918. Meteorologist, United States Weather Bureau, 1918-21. Secretary (1919-) and Treasurer (1921-), American Meteorological Society. Fellow, Royal Meteorological Society. Member, Association of American Geographers.

*STANISLAUS THOMAS J. NOVAKOVSKY, PH.D.

1 May St.

Associate Professor of Economic Geography, 1922-.

Professorial Lecturer of Geography, Clark University, 1921-22.

Graduate, Kiev Commercial Institute, 1914; Master of Economic Science, 1916; Assistant Professor of Geography in Kiev Commercial Institute and Kiev Geographical Institute, 1917. Ph.D., Yale University, 1921.

*Absent on leave, first semester, 1922-23.

KENNETH STILLMAN RICE, SC.M.

3 Hawthorn St.

Assistant Professor of Biology.

Honorary Fellow in Biology, 1919-20; Assistant Professor, 1920-. Assistant Professor of Biology, Clark College, 1919-20.

Ph.B., Brown University, 1913; Sc.M., 1915; Graduate Student in Physiology, 1915-17. Scientific Assistant in U. S. Bureau of Fisheries Laboratory, Woods Hole, Mass., Summers of 1915 and

1916. Instructor in Physiology, Medical School of the University of Georgia, 1917-18. Instructor in Biology, Tufts Pre-medical School, 1918-19.

KIMBALL YOUNG, PH.D.

2 Isabella St.

Assistant Professor of Psychology, 1922-.

A.B., Young University, 1915. A.M., University of Chicago, 1918. University Research Fellow, Leland Stanford, Jr., University, 1919-20. Ph.D., Leland Stanford, Jr., 1921. Assistant Professor of Psychology, University of Oregon, 1920-22.

BAKER, OLIVER EDWIN, PH.D.

Professorial Lecturer in Agricultural Geography 1923-.

B.Sc., Heidelberg (Ohio) University, 1903. M.S., 1904. M.A., Columbia University, 1905. Student, Yale University, 1907-08. Wisconsin Agricultural Experiment Station, 1910-12. Agricultural Economist, Bureau of Farm Management and Farm Economics, U. S. Department of Agriculture, 1912-. Ph.D., University of Wisconsin, 1921.

VLADIMIR TRIPHON DIMITROFF, A. M.

2 Elmer St.

Instructor in Biology, 1921-.

Ph.B., Brown University, 1920; A.M., 1921; Assistant in General Biology, 1918-19, 1920-21. Assistant in Laboratory and Clinic of Providence City Hospital, 1918-20. Inspector in Providence Mosquito Campaign, 1921.

PRESTON E. JAMES, A. M.

166 Woodland St.

Instructor in Geography, 1921-.

A.B., Harvard University, 1920; A.M., 1921; Assistant in Geography, 1919-20. Member, United States Geological Survey, 1920.

PERCY MARTIN ROOPE, A. B.

15 Shirley St.

Instructor in Physics.

A.B., Clark College, 1920; Instructor in Physics, 1921.

Instructor in Physics, Kalamazoo College, 1920-21.

EARL G. MELLOR, A. B.

202 May St.

Instructor in Romance Languages, 1922-.

A.B., Clark College, 1918. U. S. Ambulance Corps, 1918-19. Instructor, Blair Academy, 1919-21. Student, University of Paris; and Instructor, Ecole du Château, Soisy sous Etolles, Seine et Oise, France, 1921-22.

ROBERT CLOUTMAN DEXTER, A. M.

12 Beaconsfield Rd.

Instructor in Social Science, 1922-.

Graduate Student, 1921-22; Honorary Fellow, 1922-23; Instructor in Social Science, 1922-.

A.B., Brown University, 1912; Graduate Student, 1912-13; A.M., 1917. Graduate Student, Harvard University, 1913-14.

Special Agent, Massachusetts Society for the Prevention of Cruelty to Children, 1913-15. General Secretary, Charity Organization Society, Montreal, Canada, 1915-18. Military Relief Department, American Red Cross, 1918-19. General Secretary, Associated Charity, Atlanta, Ga., 1919-20; Community Service, Inc., 1920-22.

ALBERT FARNSWORTH, A. M. 31 Chesterfield Rd.
Instructor in Government, 1922-.

Graduate Student, 1918-19; Scholar in History and International Relations, 1919-20; Fellow in History and International Relations, 1920-21; A.M., 1921; Instructor in Government, 1922.

Assistant in History, Brown University, 1908-10; A.B., 1910. Teacher in Phillips Academy, Andover, Mass., 1910-14. Teacher of History, Newton, Mass., High School, 1914-18. Teacher of History, Classical High School, Worcester, Mass., 1918-. Joint Director of Leyden Tutoring School, Hanover, N. H., 1911.

JOHN BURKE O'LEARY, A. M. 57 Channing St.
Instructor in Economics, 1922-.

Graduate Student, 1916, 1919-23; A.M., 1921; Instructor in Economics, 1922-.

A.B., College of the Holy Cross, 1915; Instructor in History and Civics, St. Francis College, 1916-17. Principal, Stacey School, Milford, Mass., 1917-18. Teacher, Worcester High Schools, 1919-

JOSEPH DE PEROTT 5 Hawthorn St.
Lecturer in Mathematics. (Emeritus.)

DOUGLAS CLAY RIDGLEY, A. B. 166 Woodland St.
Lecturer in Geography, 1922-.

A.B., Indiana University. High School Instructor and Principal, Chicago Schools. Professor of Geography and Head of Department of Geography, Illinois State Normal University.

ERNEST RAYMOND WHITMAN 1 Webster St.
Director of Physical Education.

OTHER OFFICERS

WILLIAM ARMITAGE AVERILL, A.B. 193 Lovell St.
Special Administrative Assistant to the President, 1921-.

Carnegie Foundation for the Advancement of Teaching; New York Bureau of Municipal Research; New York State Department of Education. United States Central Bureau of Planning and Statistics, Washington, D. C.

FREDERICK HERBERT BAKER, M. D., (Harvard)	4 Linden St.
Medical Director.	
FLORENCE CHANDLER	938 Main St.
Bursar.	
J. EDWARD BOUVIER	22 Lenox St.
Musical Director.	
E. C. BELKNAP	9½ Hancock St.
Curator, Department of Chemistry.	

ASSISTANTS

EDMUND GUSTAVE ERIC ANDERSON, Biology.	
GEORGE FLETCHER DESAUTELS, Chemistry.	
ALLAN DICKIE, Romance Languages.	
FLOYD REED EASTWOOD, Physical Education.	
JOHN VINCENT FORD, History and International Relations.	
JOHN D. FORNEY, Chemistry.	
LAWRENCE STANLEY FOSTER, Chemistry.	
HENRY DOUGLAS FRYER, Psychology.	
CLIFFORD EMORY HORTON, Physical Education.	
JAMES ALBERT HENRY IMLAH, History and International Relations.	
ERNEST WILLIAM JOHNSON, Chemistry.	
THORSTEN WAINO VALENTINE KALIJARVI, History and International Relations.	
CLIFFORD KIRKPATRICK, Political and Social Science.	
LOUIS ORVILLE MACHLAN, Political and Social Science, and History and International Relations.	
JOHN PUCILLO, Physical Education.	
CHESTER HINES SHIFLET, Chemistry.	
MILES ALBERT TINKER, Psychology.	

The University

General Information

LOCATION

Clark University is located in Worcester, Massachusetts, an industrial and educational center with a population of nearly two hundred thousand. It is distant about forty miles from Boston and from Providence, and about two hundred miles from New York City.

Situated at the eastern border of the Central Massachusetts upland at an altitude of nearly six hundred feet above sea level, excessive humidity is seldom experienced and the climate is bracing.

GROUNDS AND BUILDINGS

The University Campus is a tract of about eight acres bounded by Main, Woodland, Maywood, and Downing Streets, about a mile and a quarter from City Hall. Here the principal buildings are located. Besides this tract, the institution owns the athletic grounds between Maywood and Beaver Streets, the land between Woodland and Charlotte Streets, where the Dining Hall is located and the Hadwen Arboretum, the bequest of Mr. O. B. Hadwen, a tract of about twenty acres situated on Lovell and May Streets.

The Main Building, completed in 1889, is a four story granite and brick building, 204 feet by 114 feet, of fire resisting construction, containing about ninety rooms.

The Science building, completed in 1889, is constructed of brick with brick partitions throughout. It has the form of a letter L with each wing about 135 feet in length. The wing adjacent to Woodland Street, containing about twenty-eight rooms on three floors, is occupied by the Department of Chemistry. The other wing, containing about twenty-two rooms on four floors, is occupied by the Department of Physics.

The Library Building, completed in 1903, is architecturally

the most noteworthy of the University buildings. The design is a modern adaptation of the Gothic style. The exterior is of brick on a granite foundation. The interior is finished throughout in oak. The original building, facing Main Street and extending back along Downing Street, is 78 feet by 168 feet and three stories in height.

The New Wing of the Library, completed in 1910, now known as the Geography Building, is 56 feet wide and extends along Main Street for 111 feet. It is connected by corridors to the original building, which it matches in design.

The Dining Hall, at the corner of Woodland and Charlotte Streets, was completed in 1908. It is about 43 feet wide by 123 feet long, one story high, with a basement mostly above ground, and is built of brick. The equipment is modern in every respect, and ample for the accommodation of about two hundred regular boarders.

The University also owns the residences on Woodland Street occupied by President Atwood and by Ex-president Hall, and several other dwellings, including two at the Hadwen Arboretum.

ORGANIZATION

The University includes:

The Undergraduate School offering a general collegiate course leading to the A. B. degree.

The Graduate School, offering advanced instruction leading to the A. M. and Ph. D. degrees.

The Graduate School of Geography, offering special training leading to higher degrees in Geography and related subjects.

The Summer School, offering both undergraduate and graduate instruction.

The Library with its separate endowment, offering unusual opportunities for study and research.

The courses of study offered are distributed among fourteen departments:

1. Ancient Languages and Literatures
2. Biology
3. Chemistry
4. Education and School Hygiene

5. English Language and Literature
6. Geography
7. Geology
8. German Language and Literature
9. History and International Relations
10. Mathematics
11. Physics
12. ~~Political and Social Science~~
13. Psychology
14. Romance Languages and Literatures

Announcements of the different schools and of the different departments will be found, each under its own heading, in the following pages.

Until 1920, the graduate and undergraduate faculties were organized independently. During the academic year 1920-21 the University was reorganized according to the following plan:

THE BOARD OF TRUSTEES is the ultimate authority in all matters pertaining to the University.

THE PRESIDENT is the executive officer of the institution.

THE FACULTY consists of the President, the Librarian, and all members of the staff giving regular courses of instruction. It has immediate supervision over the general educational work of the University and is responsible for the nomination to the Board of Trustees of candidates for baccalaureate degrees and for honorary degrees.

THE SENATE is an advisory body consisting of not less than six members of the Faculty, appointed by the President.

THE GRADUATE BOARD consists of President and representatives of the departments offering advanced graduate instruction. It has general control of the work of the Graduate School and is responsible for the nomination to the Board of Trustees of candidates for the degrees of Master of Arts and Doctor of Philosophy.

THE COLLEGIATE BOARD consists of the President, the Collegiate Dean, the Collegiate Registrar, and six members of the Faculty appointed by the President. It has immediate supervision over the work of the Undergraduate School subject to

the direction of the Faculty and recommends to the Faculty candidates for the baccalaureate degrees.

EACH DEPARTMENT is organized in a manner agreed upon by the members of the Department with the approval of the President. The Departments are responsible for the instruction offered in their respective fields and may make recommendations to the President in regard to appointments and promotions.

THE ACADEMIC YEAR

The University begins on the Wednesday before the third Thursday in September, and Commencement Day is the third Monday in June. The first semester ends on the Saturday before the twentieth Monday, and the second semester begins on the twentieth Monday of the academic year. There are three recesses during the college year: Thanksgiving Day and the two days following; eight to ten days including Christmas and New Year's Days; and the week beginning with the first Monday in April. University exercises are suspended also on Columbus Day, Washington's Birthday, Patriots' Day, and Memorial Day, and during some of the morning hours on Founder's Day, in order to permit students to attend the commemoration exercises.

The Summer School begins on the Monday following July 4, and continues in session for six weeks.

Students are expected to be present on the first day of each term and to continue in attendance from day to day to the end of the term.

ADMISSION

Three classes of students are admitted:

1. Undergraduates. For requirements see page 30.
2. Graduate students. For requirements see page 41.
3. Special students. Mature persons, not candidates for a degree, who wish to take advantage of the opportunities for study afforded by the University, and who give satisfactory evidence of adequate preparation for the work which they wish to undertake.

Requests for information and for application forms should be addressed to the Registrar.

REGISTRATION

Registration of programs of study takes place on the opening day of the academic year, and, when there is any change of program for the second semester, on the first day of the semester.

Registration for the Summer School takes place on the first day of the session.

TUITION AND FEES

The tuition in the Undergraduate and Graduate Schools is \$100 per year, payable in two equal installments. These installments are due at the beginning of each semester. If the tuition is not paid within ten days after it is due the enrollment of the student lapses. A student whose enrollment has lapsed for non-payment of tuition may be re-enrolled, with permission of the proper administrative officer, on payment of the overdue tuition with an additional fee of \$2.

Teachers and others carrying small programs are charged at the rate of \$20 for a course meeting once weekly through the year, and \$10 for each additional hour per week through the year.

Tuition in the Summer School is \$20 for a single course, \$30 for two courses, and \$40 for three courses. Tuition may be paid at any time before the opening of the Summer School, and must be paid by noon of the first Saturday of the term.

A matriculation fee of \$5 will be required of all students entering Clark University after January 1, 1922. This is paid but once, and will permit a student to return successive years, or after a period of absence, without any further charge for matriculation. This fee will apply also to students who register for the Summer School after the above date.

Laboratory fees are charged according to the following schedule:

\$2.50 each semester for undergraduate laboratory courses in Biology, Geology, Physics, Psychology, and courses 11 and 12 in Chemistry.

\$5 each semester for other undergraduate laboratory courses in Chemistry.

A deposit of \$10 for each course, to cover breakage, is required of students taking undergraduate laboratory work in Chemistry. Any balance remaining at the end of the year will be returned on application; and if the deposit is not sufficient to cover breakage, any excess will be collected by the Bursar.

A deposit of \$25 is required of each graduate student in the Department of Chemistry, at the beginning of the year. Ordinary supplies and materials are charged to the student's account at cost. Any balance remaining will be refunded at the end of the year.

Laboratory fees and deposits for breakage are due at the time of registration for the courses.

Diploma fees are charged according to the following schedule:

\$5 for the Bachelor of Arts diploma.

\$10 for the Master of Arts diploma.

\$25 for the Doctor of Philosophy diploma.

These fees are due before the delivery of the diploma.

EXPENSES

Board at the Dining Hall is furnished at cost and the charge has varied from year to year. During the current year the charge has been \$7 per week.

Undergraduates who do not live in their own homes are required to board at the Dining Hall.

The University has dormitory accommodations for a small number of male graduate students only. Lodging can be secured within convenient distances at a cost for furnished room as low as \$3.00 per week.

The cost of books varies greatly with the programs of study and no definite estimate of this item of expense can be given. The University maintains a book store which is operated without profit in order to reduce the cost of text-books and supplies.

FELLOWSHIPS, SCHOLARSHIPS, AND STUDENT AID

UNIVERSITY FELLOWSHIPS for graduate students are provided annually from the income of the George F. Hoar Fund of one hundred thousand dollars, the gift of Andrew Carnegie. A senior Fellow may receive two hundred dollars, a junior Fellow,

one hundred dollars, with remission of tuition in each case. The number of Fellowships of each class and their distribution among the departments of instruction vary from year to year. These Fellowships are intended for candidates for the doctor's degree who are devoting their entire time to University work. The senior Fellowship will ordinarily be awarded only to persons who, in the opinion of the department with which the candidate is doing his major work, gives promise of obtaining the degree after a year of work; and the junior Fellowship is similarly reserved for candidates who give promise of obtaining the degree after two years of work.

Application blanks may be obtained from the Secretary of the Graduate Board, and applications should be filed with the Secretary by April first for consideration by the Board at its April meeting. The Board may, however, consider applications made at other times.

THE AMERICAN ANTIQUARIAN SOCIETY FELLOWSHIP in American History, having a value of four hundred dollars in addition to the remission of tuition, has been established by members of the American Antiquarian Society. This Fellowship will be awarded to a student whose *major* is in American History.

Fellows must reside in Worcester during the entire academic year and devote themselves to study under the direction of their instructors. They must co-operate in promoting harmony, order, and all the aims of the University, and must not teach elsewhere.

Being intended primarily as honors, Fellowships are awarded without reference to pecuniary needs. Those Fellows able and desiring to do so may relinquish the emolument and retain the title.

UNIVERSITY GRADUATE SCHOLARSHIPS, yielding tuition, are awarded to students of ability in their first year of graduate study upon recommendation of the major department in which they will work and approval by the Graduate Board. Application blanks may be obtained from the Secretary of the Graduate Board and will be considered by the Board at its April meeting and at such other times as it may elect.

UNDERGRADUATE SCHOLARSHIPS are awarded to undergraduates primarily upon the basis of pecuniary need, with due regard

to character and ability. Twenty of these Scholarships are available at present. Five Major Scholarships, yielding tuition for one year, and ten Minor Scholarships, yielding tuition for one semester, are awarded at the beginning of the academic year to students in regular standing who have completed at least one fourth of the work required for the Bachelor's degree. The remaining five Minor Scholarships will be open at the beginning of the second semester to members of the freshmen class in regular standing.

THE LIVERMORE AND AMBULANCE SCHOLARSHIP was endowed by citizens of Worcester in honor of Charles Randall Livermore, Clark College, '17, the first Clark man to fall in battle, and of his companions in the Clark Unit of Ambulance Drivers. A scholarship of fifty dollars or more is offered from the income of the fund, to be awarded on the basis of academic success, character and usefulness to the College. The scholarship is open to students in regular standing in any class of the College who are residents of Worcester County, but preference will be given, other things being equal, to members of the Clark Unit still studying as undergraduates.

THE B'NAI BRITH SCHOLARSHIP is the income from a fund of \$1,350 provided by the Order of B'nai Brith, primarily but not exclusively for the aid of Jewish students.

Applications for undergraduate scholarships should be filed with the [Collegiate Registrar not less than ten days before the beginning of the semester.] Applicants for Major Scholarships must have attained in their previous work at Clark an average grade entitling them to rank in the highest third of their respective classes, and applicants for Minor Scholarships must have attained a rank above the middle of the class. Awards are made by the Collegiate Board.

The University expressly reserves the right to award less than the full number of scholarships of either sort in any year if less than the full number of worthy candidates apply or if for any other reason it may seem advisable to do so.

A CITIZEN'S FUND has been established by a citizen of Worcester in the sum of five thousand dollars, the income of which is to

be used for the aid of "some one or more worthy native born citizens of the City of Worcester who may desire to avail themselves of the advantages of the institution." The benefits of this fund are available to graduate students only.

THE JOHN WHITE FIELD FUND, the income of which is "to provide for the minor needs of a Scholar or Fellow," has been established by Mrs. Eliza W. Field. The fund amounts to five hundred dollars.

The following regulations apply to the award of the income of the Field Fund:

1. Regard is had to the intellectual ability of the candidate as well as to the need of pecuniary assistance.
2. Only candidates who have spent three months in graduate work at the University are considered.
3. The head of each department will consider and report to the Faculty desirable cases in his department.
4. Applications are received not later than December 15, and the awards made as soon as possible after the Christmas recess.

THE ELIZA D. DODGE FUND is a sum of one thousand dollars the income only of which is to be expended to aid graduate students of limited means engaged in research work.

THE HENRY A. WILLIS FUND, of \$5,000 provides an annual scholarship for students coming from Fitchburg and vicinity, but in the absence of a suitable recipient from this community other disposal may be made.

Aid which is given in the form of scholarships and from the various Funds of the college is not regarded as a loan. If, however, those who avail themselves of such aid are able to return the amounts in later years, credit will be given on the books of the University Treasurer, and the sums, whatever they may be, will be put into the Funds of the University for the use of other students in like circumstances.

THE CLARK COLLEGE LOAN FUND. Grants from this Fund are made on recommendation of the President or Collegiate Dean in amounts determined by the need of the applicant but seldom in excess of one hundred dollars per year to any single applicant.

The loans are covered by notes payable at a fixed date after graduation and bear interest after maturity at the rate of six per cent per annum. In order to be eligible for a grant from this Fund the student's academic record must give him rank above the lowest third of his class. Applications may be made at any time.

THE ESTABROOK LOAN FUND. This is a revolving Fund created by the generosity of the late Arthur F. Estabrook of the Board of Trustees and now amounting to a total of about four thousand two hundred and fifty dollars, most of the amount being at present in hands of earlier borrowers. The Fund is administered by the Collegiate Dean, and grants from the money available are made at any time without the requirement of the standing in scholarship applying to the College Loan Fund. The notes given to cover the grants are payable after graduation and without interest, but it is expected that loans from this Fund will be repaid as promptly as possible.

The following members of the alumni have subscribed \$475, which will be available for a loan to students: H. M. Smith, C. B. L. Kelly, L. Kelly Foster, Isadore Lubin.

HEALTH AND PHYSICAL TRAINING

The Medical Director, Doctor Frederick H. Baker, exercises general supervision over matters of health and hygiene in the University. For undergraduates a thorough medical examination is required at the beginning and end of each year. Three hours per week of Physical Training are required of all who are not excused for adequate reasons. Medical examinations and Physical Training are optional with graduate students.

The Medical Director is available during the academic year for conferences and medical advice. It is intended that his services shall be primarily of a preventive nature. The University does not conduct an infirmary and does not undertake to care for cases of illness requiring medical attention or hospital accommodations, although it will cooperate in every possible way in meeting such emergencies.

The Director of Physical Education has supervision over all required Physical Training and other athletic activities. In the matter of intercollegiate contests he is assisted by the Committee on Athletics of the Faculty.

The University athletic grounds lie on the opposite side of Maywood Street from the campus. The tennis courts here are among the best in the city; there is a fine cinder running track about an eighth of a mile in length, and ample provision has been made for the practice of all sorts of track athletics.

The gymnasium is located on the ground floor of the Main Building. Individual steel lockers and an ample number of shower baths are provided.

PUBLIC LECTURES

Several series of public lectures, by competent speakers both from within and without the University, are given during the year. The weekly General Assembly of the students is frequently addressed by invited speakers from outside. On these occasions members of the University hear many men and women of national and international reputation.

The Undergraduate School

(Clark College)

ADMINISTRATION

COLLEGIATE BOARD

THE PRESIDENT OF THE UNIVERSITY
THE COLLEGIATE DEAN
THE REGISTRAR
PROFESSOR AMES
PROFESSOR BRACKETT
PROFESSOR CHURCHMAN
PROFESSOR GODDARD
PROFESSOR MERIGOLD, *Sec.*
ASSISTANT PROFESSOR RICE

STANDING COMMITTEES

The President and the Dean are *ex officio* members of all committees.

ON ADMISSIONS: The Registrar, Messrs. Goddard and Brackett.

ON STUDENTS' STANDING: The President, The Dean, The Registrar, and the Instructors and Advisers of the Students under consideration.

ON CURRICULUM: The Registrar, Messrs. Ames and Churchman.

ON STUDENTS' FINANCES: Messrs. Randolph, White and Williams.

ON COOPERATION WITH STUDENTS: Messrs. Barnes, Dodd, Merigold and Randolph.

ON ATHLETICS: Messrs. Brackett, Whitman and Williams.

ON THE THREE YEAR STUDENTS: The Registrar, Messrs. Blakeslee, Brooks, and Rice.

ON SUMMER SCHOOL: The President, The Director of the Summer School, Messrs. Melville, Churchman, Ridgley.

THE COLLEGE

The unique features of the College are its flexible system of admissions, the adjustments of its requirements for the bachelor's

degree to different types of preparation for college work, and the emphasis upon a three-year course leading to the degree of Bachelor of Arts for well-prepared students who are willing and able to maintain a high standard of scholarship and to devote themselves zealously to their studies.

The three-year course was adopted as the normal one for the baccalaureate degree when the College was established in 1902. This innovation was in part due to the emphasis placed upon a three-year course in the will of the founder, and in part the result of a conviction that properly prepared students could, under favorable conditions, secure in three years a training in no substantial degree inferior to that ordinarily obtained in a four-year college course. Increasing pressure, on the one hand, for the admission of high school graduates who could not qualify for the three-year course and, on the other hand, for a larger development of extra-curricular activities, including athletics, has led to a modification of this plan. Beginning with the class entering in September 1922, a regular four-year course leading to the Bachelor of Arts degree will be offered to those who meet the normal requirement for admission. The three-year course will, as is indicated above, continue to be open to qualified students and to be emphasized in accordance with the traditional policy of the College and the intent of its founder.

The College has a competent faculty, large in proportion to the number of students, and is well equipped for the work which it undertakes. It especially commends itself to earnest young men who wish to economize either in time or money. In accordance with the expressed wish of the founder, the tuition and other expenses have been kept as small as possible. A general and well-balanced undergraduate curriculum leading to the degree of Bachelor of Arts is offered. Distinctively vocational or professional work is not offered. Certain departments, particularly the Department of Chemistry, have, however, been able to give a training which has enabled students to take up professional employment immediately after graduation.

A complete statement in regard to fees and expenses, scholarships, and general conditions of work will be found on pages 21-26.

ADMISSION

It has been the practice to regard every admission as an "admission on trial" to the actual work of the College. A student whose record fails to meet the expectations implied by his admission may be required to withdraw at any time. No applicant will be admitted with conditions to be made up after entrance.

Applications for admission should be made as early as is practicable, on blanks supplied by the College. Applicants should present themselves in person, if possible, to a member of the Committee on Admissions. The official transcript of the applicant's preparatory school record and the certificate of character which is required should preferably be sent directly to the College by the school official who signs them. Blank forms for this purpose will be furnished on request.

ADMISSION TO THE FRESHMAN CLASS

The requirements for admission as a regular student are:

1. Graduation from an approved New England high school or institution of like standards with a course representing not less than fifteen acceptable units of school work, or the substantial equivalent of such preparation.

NOTE 1. No preparatory school will be regarded as approved which requires for graduation less than four full years of study after the usual grammar school course.

NOTE 2. The standard unit of quantity in preparation is a quarter of a year's work, the amount of work usually covered in a subject taken four or five times a week through a year of thirty-eight to forty weeks with recitation periods of not less than forty minutes.

2. A reasonable distribution of the units offered among the subjects included in the high school curriculum and a reasonable amount of continuity. A single year's work in a foreign language is usually not regarded as an acceptable unit in meeting requirements for admission.

3. Creditable standing in the preparatory school. This is generally interpreted to mean that at least two-thirds of the units presented must have received a grade which the school gives for work which it is willing to "certify" for admission to college. Applicants who have made exceptionally

creditable records in their preparatory school courses may be admitted with only fourteen units.

Candidates unable to meet in full the requirements indicated above may be admitted by passing the comprehensive examinations offered in June by the College Entrance Examination Board. Information concerning the Board may be obtained by pupil or teacher on addressing 431 West 117th St., New York City. Applications and fees must be forwarded to the Board at least four weeks before the intended examinations. In September examinations are conducted by the College and are held in Worcester only. Special examinations will be given to establish credit in the following subjects: English, Mathematics, French, German, Spanish, Latin, Greek, History, Physics, Chemistry, Biology, Botany, Zoölogy and Physiology.

In connection with these examinations, general intelligence tests may also be used.

Examinations will be held on the Monday and Tuesday preceding registration. Candidates should make request for examination at least a week in advance.

Applicants whose preparation has been irregular will be accepted, if at all, only after a thorough consideration of each individual case by the Committee on Admissions.

ADMISSON TO ADVANCED STANDING

A student who wishes to enter the College after previous study at another institution of the same grade is required to submit a letter of honorable dismissal, a complete transcript of his record at the last institution attended and such other information as the Committee on Admissions may request. If he is admitted he will be provisionally assigned to the freshman, sophomore, junior, or senior class and will be permitted to register for such courses as he is prepared to undertake. He will not be given a final class rating or a definite amount of credit for work done elsewhere until he has been in residence for at least one semester. After satisfying this requirement as to residence he will be given credit for the work done at any other institution to an amount depending in each case upon the time spent upon it, the grade received, and upon the record made here. Such credit is granted by the vote of

the Collegiate Board upon the recommendation of the Registrar.

The Bachelor's degree will not be conferred upon a student who has not spent at least a year in residence here, and usually not unless the time spent in residence includes the two semesters immediately preceding the granting of the degree.

FACULTY ADVISERS

When a student is accepted by the Committee on Admissions he is assigned to a member of the Faculty who will act as his adviser. The adviser will assist the student in making up his program of studies for registration and will be ready at all times to afford him help and counsel, either in regard to problems of the student's college life or other matters. The student should consult with his adviser as soon as possible in order to outline his program of studies before the opening of the college year. In all cases of action directly affecting a student the adviser is his representative before the Faculty and will present the student's views and desires.

REGISTRATION

Registration of the program of studies is required on the first day of the academic year, and in case of any change of program for the second semester, on the first day of the semester. Due notice is given by the Registrar in advance of these dates in regard to the detailed procedure of registration.

During the first two weeks of any semester changes of courses may be made for sufficient reason with the written approval of the student's adviser and the instructors concerned. After the first two weeks of any semester no changes may be made except such as are authorized by special vote of the Faculty or of the Collegiate Board.

The election of a *major* and *minor* is required as a part of registration at the beginning of a student's second year in college. This election when once recorded may be changed only at the beginning or end of a semester, and then only with the approval of the Dean. Although the *major* and the *minor* are not officially regarded as fixed until the student's second year in college he should plan his course from the beginning as definitely as possible with his probable choice in view.

STUDENT PROGRAMS

Regular students normally carry programs which yield a credit of fifteen or sixteen semester hours for each semester, in addition to the required work in Physical Training. These programs may include lectures, recitations, or work in laboratories. In general it is expected that all courses will require two hours of preparation for each lecture or recitation. Three hours are assumed for each laboratory period which is counted as the equivalent of an hour of recitation and its two hours of preparation. A student carrying the regular program should expect his college work to require from forty-five to fifty hours of his time per week, in addition to the work in Physical Training.

Candidates for the Bachelor's degree in less than four years will generally carry programs of from eighteen to twenty hours per week and should expect to spend practically their entire time on their college work.

A student may choose his *major* in any one of the fourteen departments and his *minor* in a related department. The choice of *major* and *minor* usually involves certain specific requirements in other subjects. For these and for statements as to what particular courses may be used for a *major* and a *minor* the announcements of the different departments should be consulted.

First year students must make up their program entirely from courses designated as "Open to freshman." The program for the Freshman year must include:

1. English
2. A course in Foreign Language
3. A course in Division A
4. A course in Division B
5. An elective
6. For three-year students, a second elective.

The elective will be in Mathematics for students who expect to *major* in Science and in Latin or Greek for students who expect to *major* in Foreign Language. Other students may meet the requirement (h) page 36, by electing either Greek, Latin, or Mathematics.

Other undergraduates may enter any course listed "primarily for undergraduates," for which, in the judgment of the instructor in charge, they are prepared. Seniors are admitted, at the discretion of the instructor in charge, to courses listed "for advanced undergraduates and graduate students"; juniors may be admitted to these courses only by special vote of the Collegiate Board. Undergraduates are not admitted to courses primarily for graduate students except in rare cases, and then only by special vote of the Collegiate Board.

THE CURRICULUM

The curriculum is arranged upon a plan which permits considerable freedom of adjustment to individual differences of interest. Each student's program of studies contains two principal subjects (a *major* and a *minor*) together with required courses in English and certain subjects chosen in accordance with rules intended to insure a reasonable distribution of work among the various departments. A large part of each program is made up of courses chosen without restriction.

A *major* consists of at least twenty-four semester hours and a *minor* of at least eighteen semester hours made up of such courses as are specified in the announcements of the various departments.

In order to facilitate the statement of requirements, the departments of instruction are grouped in three divisions:

DIVISION A

Biology, Chemistry, Geology, Mathematics, Physics

DIVISION B

Education and School Hygiene, Geography, History and International Relations, Political and Social Science, Psychology.

DIVISION C

Ancient Languages, English, German, Romance Languages.

PHYSICAL TRAINING

Physical Training, three hours per week, is required of every student in the College, unless excused for adequate reasons.

The purpose of the requirement is to insure the healthy muscular exercises which every student needs from day to day, and

The following statement has been prepared in order that all persons interested might be fully informed as to the requirements for graduation under the regulations now in force.

Dec. 15, 1922

C. E. Melville, Registrar

Requirements for Graduation-Clark College

Class of 1923.

- a. 108 semester hours for 3-year students and 120 semester hours for 4-year students, including all of the subjects required by regulations printed in the May 1921 catalog.
- b. For 3-year students, an average rank not lower than Group III in all college work completed after Sept. 20, 1922.
For 4-year students, an average rank not lower than Group III in three-fifths of all the college work completed after Sept. 20, 1922.

Class of 1924.

- a. 108 semester hours for 3-year students and 120 semester hours for 4-year students, including all subjects required by the regulations printed in the May 1922 catalog.
- b. For 3-year students an average rank not lower than Group III in all college work completed after September 20, 1922.
For 4-year students, an average rank not lower than Group III in three-fifths of all the college work completed after Sept. 20, 1922.

Class of 1925 and Succeeding Classes

- a. 120 108-semester hours for all students, including all of the subjects required by the regulations of the College.
- b. An average rank not lower than Group III in three-fifths

of the 120 hours required for graduation.

Notes:

a.

A student on the 3-year basis will, as a rule, carry a program of 18 or more hours per week and is required to maintain a rank in Group II or better in two-thirds of his work. Additional credit is given for high rank on the basis of one-half semester hour for each rank in Group I, and one-fourth semester hour for each rank in Group II in a three-hour course. A rank in Group IV cancels to the extent of one-half hour any extra credit resulting from ranks in Groups I or II in the same semester. A program of 18 hours a week carried through 3 years will under the above arrangements yield a total credit of 117 semester hours if a rank in Group II is secured in all courses, leaving 3 hours additional to be provided at some time during the 3 years. A student who is allowed to carry 18 hours throughout his course will normally have at the end of 3 years not less than 114 semester hours credit.

b.

In order to remain "in good standing" a student must secure a rank in Group III or better in at least 2 courses.

c.

Under the new plan of reporting students' standings the significant fact is the relative rank of a student in each individual course. In all the regulations based upon the new system:

A rank in Group I means "among the first 5 in an average group of 100".

A rank in Group II means "among the first 25 in an average group of 100".

A rank in Group III means "below the best 25 and above the lowest 25 in an average group of 100".

A rank in Group IV means "among the lowest 25 in an average group of 100".

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

CHICAGO, ILLINOIS

SEPTEMBER 10, 1936

PROFESSOR J. H. JOHNS

PHYSICS DEPARTMENT

UNIVERSITY OF CHICAGO

CHICAGO, ILLINOIS

DEAR PROFESSOR JOHNS:

I have the pleasure to acknowledge the receipt of your letter of the 7th inst.

concerning the matter of the proposed visit of Dr. J. H. JOHNS to the University of Chicago.

I am sorry that I am unable to give you a more definite answer at this time.

However, I am sure that you will understand the situation.

I am, very respectfully,
Yours truly,
J. H. JOHNS

Enclosed for you are two copies of the report of the Committee on the proposed visit of Dr. J. H. JOHNS.

I am, very respectfully,
Yours truly,
J. H. JOHNS

Enclosed for you are two copies of the report of the Committee on the proposed visit of Dr. J. H. JOHNS.

to bring about such a general physical condition as will lay the foundation of future health and make of the body a ready servant of the mind rather than a drag and hindrance to it.

The hours at which the work in Physical Training is given are set at times which avoid conflict with recitation hours.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

1. A minimum period of study in residence of three academic years.

2. One hundred and twenty semester hours of credit with satisfactory standing.

The one hundred and twenty hours required for graduation must include:

- a. A *major* of not less than twenty-four semester hours.
- b. A *minor* of not less than eighteen semester hours.
- c. *Physical Training*, three hours per week, through the course.
- d. *English*, twelve semester hours, including English 11 required in the first year, and six semester hours additional required in the first or second year of the course. English 16, Advanced Composition, is required in the second year of all students who fail to obtain a satisfactory grade in English 11.
- e. *Foreign Language*, at least twenty-four semester hours, including credits offered for admission. Foreign Language offered for admission will be credited on the basis of six semester hours for two units of preparatory work in one language, twelve semester hours for three units in one language, and eighteen semester hours for four units in one language.

One course in Foreign Language is required in the Freshman year.

The total requirement must be divided between two languages with not less than six semester hours in each.

- f. *Division A*, twelve semester hours normally, which may be increased to eighteen semester hours or diminished to six

semester hours, according to the amount of Science included in the preparatory course.

Six semester hours of this requirement must be in some one laboratory course in Biology, Chemistry or Physics, and not more than six semester hours may be in a single subject.

g. † *Division B*, twelve semester hours normally, which may be increased to eighteen semester hours or diminished to six semester hours, according to the subjects included in the preparatory course.

h. *Greek*, or *Latin*, or *Mathematics*, or *advanced modern foreign language*, six semester hours.

For a student whose *major* lies in Division A, this credit must be in Mathematics, taken in the first year of his course.

For a student whose *major* lies in Division C, this credit must be in Greek or Latin. A student who has offered two units of Greek or Latin for admission is excused from the requirement in these languages. If this requirement is met in college, the course must be taken in the first year.

For a student whose *major* lies in Division B, this credit may be in Greek, Latin, Mathematics, or *modern* foreign language, subject to the approval of the department in which the *major* lies. If the option of a *modern* foreign language is chosen, a course of a grade of advancement not below that of the third year college courses* must be offered.

Work taken in fulfillment of this requirement may also be counted toward the fulfillment of the requirements (e)

i. or (f) *Mathematics*, six semester hours. Required of all who have not presented two units of Algebra or Geometry, or both, for admission.

This may not be counted in partial fulfillment of the requirement in *Science* (f).

† This requirement must be divided between at least two departments with not less than six semester hours in each.

*French 112, Scientific French is not accepted in fulfillment of this requirement.

The students who satisfy all of the foregoing requirements will be recommended for the Bachelor's degree unless in the judgment of the Faculty there is cause for withholding this recommendation.

HONORS

"First Honors" and "Second Honors" are awarded annually to those members of each class who have, in the judgment of the Faculty, distinguished themselves by their scholarship during the year.

The Bachelor's degree is awarded "With Honor," "With High Honor," and "With Highest Honor" to those members of each graduating class who have made the most creditable records.

In 1914 the Clark Scholarship Society was organized. The society is similar in aims to the Society of Phi Beta Kappa. Its object is, "to maintain a high and broad conception of scholarship; to encourage devotion to scholarship, so conceived; to promote a close relation for mutual benefit between the undergraduate members and the faculty members of the Society." Membership in the Society is open to members of the faculty. New student members are normally elected at the end of each year from among the men of high standing in the junior class. The Faculty makes nominations and the undergraduate members of the Society elect from the men so nominated. Additional nominations are made at the middle and end of the senior year.

A student's scholarship record is determined by his relative standing in each of his courses. College regulations concerning scholarship are based on the fundamental assumption that in any large class the major portion will do fairly satisfactory work, and that the remainder will be about equally divided between those who clearly rank above and those who as clearly rank below the group just mentioned.

In recognition of the superior quality of work necessary to insure a high rank, additional credit of at least one-quarter hour in each semester is given to approximately the leading twenty-five per cent of the students in any three hour course. This extra credit is increased to one-half hour for approximately the leading five per cent.

A student is not permitted to count toward the A. B. degree more than forty-eight semester hours of credit for courses in which his rank places him in the lowest quarter of his class.

In the detailed statement of regulations concerning scholarship the terms Group I, Group II, Group III, and Group IV are used as approximate equivalents for the upper five per cent, the upper twenty-five per cent, the middle fifty per cent, and the lowest twenty-five per cent of the students in any course.

STUDENT LIFE

It has always been the policy of the University to give to its students the greatest possible individual liberty of action and to adopt few rules of conduct.

It is assumed that each student will conform to the recognized standards of morality, good order, and gentlemanly conduct, that he will not absent himself unnecessarily from University exercises at which he is due, and that he will give his serious and constant attention to his work as a student.

While encouraging the fullest possible measure of student self-government, the College recognizes the fact that the individuals and groups, among the undergraduates require a reasonable amount of oversight in their various undertakings.

Undergraduate organizations are under such control as will insure proper caution and recognition of responsibility in business dealings.

The general supervision of intercollegiate athletics is committed to an Athletic Board consisting of the Director of Physical Training, the faculty committee on athletics, two alumni elected by the Alumni Association, and nine student members. The actions of this Board are subject to review and veto by the Committee on Athletics of the faculty

Two formal dances, the junior-freshman "Prom" in the winter, and the "Senior Prom" at Commencement time, in addition to informal dances, "Bohemians," held about once in six weeks, give opportunity for relaxation and the meeting of students and faculty on a basis of general sociability. Additional opportunities of this sort are provided by the "College Suppers" held at the Dining Hall about once a month, and by the various clubs such

as the Science Club, the Wireless Club, the Psychology Club, etc., in which both students and faculty participate.

Student activities include a Glee Club and Orchestra which give a series of concerts in Worcester and elsewhere during the winter; a Debating Society whose members have made an enviable record for the University in intercollegiate debates; the Gryphon, a senior honor society, and many other organizations.

On Sub-Freshman Day, in the spring, those who have some expectation of entering the College in September are guests of the University for the purpose of establishing mutual acquaintanceship.

THE CLARK COLLEGE MONTHLY is a magazine which was established in 1911 to provide a means of publication for the literary productions of members of the College and a forum for the expression of college sentiment, and to furnish its readers with the latest information about the life of the institution. The editorial and business management is in the hands of a student board.

The Dramatic Association is a very active student organization which presents a number of plays each year under the direction of Professor L. H. Dodd of the Department of English.

The Graduate School

ADMINISTRATION

GRADUATE BOARD

THE PRESIDENT OF THE UNIVERSITY

EDMUND CLARK SANFORD

ARTHUR GORDON WEBSTER

WILLIAM HENRY BURNHAM

GEORGE HUBBARD BLAKESLEE

CHARLES A. KRAUS

HARRY ELMER BARNES

GEORGE FREDERICK WHITE

SECRETARY OF THE GRADUATE BOARD, MR. MELVILLE

STANDING COMMITTEE ON PROFICIENCY IN FOREIGN LANGUAGES

MESSRS. BURNHAM AND WEBSTER

GENERAL INFORMATION

The courses in the Graduate School are open to properly qualified persons, both men and women.

Instruction and opportunities for original research leading to the degrees of Master of Arts and Doctor of Philosophy are offered by the following departments:

Chemistry

Education and School Hygiene

Geography

History and International Relations

Physics

Political and Social Science

Psychology

The other departments offer courses of an advanced nature which, with the consent of the Graduate Board, may be included in the programs of graduate students, but are not prepared at present to offer complete programs leading to the higher degrees.

A complete statement regarding tuition and expenses, Fellowships and Scholarships, and general conditions of work will be found on pages

ADMISSION

CANDIDATES FOR GRADUATE DEGREES

Only college graduates or those of equivalent attainments are admitted as candidates for degrees in the Graduate School.

No entrance examinations are required; but by testimonials, diplomas, personal interviews, or written specimens of work, the authorities must be satisfied that the applicants have scholarship enough to work to advantage, and zeal to devote themselves to their chosen field.

It is highly desirable that candidates should have a reading knowledge of French and German.

SPECIAL STUDENTS

In addition to those who are candidates for the advanced degrees, the Graduate School admits others desiring to undertake advanced study or original research, whose attainments are such as to qualify them for the work proposed. Such persons, provided they satisfy the departments concerned as to their training and competency in the subjects to which they wish to devote themselves, are not restricted in their choice and combination of studies.

HONORARY FELLOWS

Those who have already advanced to the Doctor's degree may be appointed Honorary Fellows and given all the privileges of the University. In past years many who have already taken this degree, either in this country or abroad, have found these appointments advantageous while waiting for collegiate and university appointments elsewhere.

LIBRARY FACILITIES

In addition to the library facilities provided by the University (see pages 60-62), students may avail themselves of the privileges of several other excellent libraries in the city. The Worcester Public Library contains some (237,000) volumes and makes accessible to the public about (600) newspapers and magazines. The library of the American Antiquarian Society, housed in the national headquarters of the society in Worcester, contains about

136,000 volumes and some 202,000 pamphlets. The library of the Worcester District Medical Society is also at the disposal of members of the University.

THE DEGREE OF DOCTOR OF PHILOSOPHY

It is to the needs of candidates for this degree that the lectures, seminars, laboratories, collections of books, apparatus, etc., are especially shaped, and no pains will be spared to afford them every needed stimulus and opportunity. It is for them that the Fellowships are primarily intended.

At least one year, but in most cases three years, of graduate work are necessary for this degree. Candidates must have previously taken the degree of Bachelor of Arts or have had a substantial equivalent for the training implied by that degree.

For this degree one requirement is a dissertation upon an approved subject, to which it must be an original contribution of value. To this capital importance is attached.

Such formal or informal tests as the Graduate Board may determine shall mark the acceptance of each student or Fellow as a candidate for this degree.

An oral, but no written, examination is required upon at least one minor subject in addition to the major before an examining jury composed of at least four members, appointed by the President of the University, and including the chief instructor under whose direction the dissertation has been prepared, other representatives of the department in which the candidate has done his major work, and a representative of the department in which the candidate has elected his minor subject. The President is also authorized to invite any person from within or without the University to be present and to ask questions. The jury through its clerk shall report the results of the examination to the Secretary of the Graduate Board. The Board will recommend satisfactory candidates for the degree.

RULES CONCERNING THE DEGREE OF DOCTOR OF PHILOSOPHY

1. *Residence.* No candidate shall receive the degree of Doctor of Philosophy without at least one academic year's previous residence.

2. *Subjects of Study.* The Candidate shall select a major subject of study and, with the approval of the department of the major subject, at least one minor subject. His program of work in major and minor subjects as recommended by the major department concerned shall be submitted to the Graduate Board for approval in October of each year.

3. *Candidature for the Doctor's Degree.* Every applicant for the Doctor's degree shall fill out, before October first, the regular application blank provided at the office. This schedule shall be submitted to his major department, which shall satisfy itself in such manner as it may desire as to the fitness of the applicant.

4. When countersigned, this schedule shall be filed with the Secretary of the Graduate Board, and the applicant will be examined in French and German, or in French or German and some other language approved by the Graduate Board, by the standing committee for that purpose.

5. In case of a favorable report by this committee, the applicant shall be a regular candidate for the degree, provided the Graduate Board shall have already voted to admit him to candidacy.

6. Candidates complying with all preliminary conditions, including the language examinations, before November first will be allowed to proceed to the Doctor's examination at any time between May fifteenth following and the end of the academic year.

7. *The Doctor's Dissertation.* The dissertation must be presented to the instructor under whose direction it is written, and reported upon by him before the Doctor's examination. In every case the dissertation shall be laid before the jury of examination, at the time of examination, in form suitable for publication, although this provision shall not preclude the making of such minor changes later as the chief instructor may approve. This copy of the dissertation shall be deposited in the Library, not to be taken out until the final form is substituted.

8. The dissertation, or an abstract that has been approved by the chief instructor as embodying and emphasizing the essential original contribution to knowledge contained in the disserta-

tion, shall be printed at the expense of the candidate, and one hundred copies deposited with the Librarian within one calendar year after the first of October following the examination. In the case of dissertations of unusual length, or containing expensive plates, the Graduate Board shall have power, at the request of the candidate to reduce the number of presentation copies to fifty; and in unusual circumstances the Graduate Board may extend the time allowed for the printing of the dissertation.

9. The candidate shall, at least one week before the conferring of the degree, deposit with the Secretary of the Graduate Board the required number of printed copies of the dissertation or abstract or in lieu of the printed copies, a written acceptance of the dissertation or abstract for publication within the required time by a responsible editor or publisher; or he shall deposit with the Bursar the sum of seventy-five dollars or an acceptable bond for that amount. No officer of the University is eligible as surety on such a bond. This sum, or bond, shall be returned to the candidate upon the deposit of the printed copies; or, should the copies not be deposited within the required time, it, or such portion of it as is necessary, shall be used to print the dissertation or abstract, and the remainder returned to the candidate. In the case of long dissertations, when a deposit is made or a bond given to insure publication, the candidate shall also be required to deposit such an approved abstract, in duplicate, of the dissertation as may be printed with the amount of the deposit or bond.

10. A candidate, who has not presented the printed copies of the dissertation one week before the conferring of his degree, shall further be required to deposit with the original copy a duplicate copy of the dissertation. One copy of the dissertation shall be allowed to circulate from the Library under such conditions as the Librarian may deem advisable; the other copy shall not be withdrawn. Both copies may, however, be replaced by a printed copy if the dissertation is printed in full; but they may not be replaced if an abstract is printed instead of the complete dissertation.

11. The favorable report of the chief instructor filed in writing with the Secretary of the Graduate Board, shall be a sufficient imprimatur or authorization for printing as a dissertation. The

printed copies shall bear upon the cover and title page the statement of approval in the following words, over signature of the chief instructor:

A Dissertation submitted to the Graduate Board of Clark University, Worcester, Mass., in partial fulfillment of the requirements for the degree of Doctor of Philosophy, and accepted on the recommendation of (NAME OF CHIEF INSTRUCTOR).

12. *Examinations for the Doctor's Degree.* The examinations for the Doctor's degree may be held at any time during the academic year, provided that at least one academic year has elapsed since the completion of the preliminaries of candidature, except in the case of fulfillment of these conditions between the beginning of any academic year, and November first of that year, to which case Rule 6 applies. The examinations shall be held at such hours and places as the President may appoint.

13. Examinations may also be held during the regular vacations of the University, but for these an additional fee of five dollars to each examiner and the reasonable traveling expenses of any examiners who are out of town, all payable in advance, will be required.

THE DEGREE OF MASTER OF ARTS

This degree is conferred upon candidates who comply with the following requirements:

1. The candidate shall have previously taken the degree of Bachelor of Arts, or have had a substantial equivalent for the training implied by that degree, to be determined by special vote of the Graduate Board; but such degree or training must involve a good preparation for the work proposed for the Master's degree, in order that it may be accepted.

2. The candidate must devote a full academic year to post-graduate work in this University after receiving the Bachelor's degree or the training accepted as its equivalent. This work shall be mainly in one department, but the candidate may do also such other work as shall be advised by the head of his principal department—whose approval of the whole course shall be necessary. In particular cases, the candidate may be allowed, by

special vote of the Graduate Board, to divide his work between two years; but the aggregate must, in all cases, amount to a full year's work, at least.

3. The candidate must satisfy his principal department that he has done his work faithfully and has mastered the subjects involved, by such written and oral examinations and other tests as the department may require. The department shall make a written report to the Graduate Board of the grounds on which the candidate is recommended, specifying the amount and character of his work, and this report shall be filed in the office of the Secretary of the Graduate Board.

4. The candidate must present a thesis or written report on some topic included in his course or closely related to it, that shall receive the approval of his principal department, be accepted by the Graduate Board, and deposited in the Library.

5. Every candidate recommended for the Master's degree shall pay a fee of ten dollars.

6. The Master's degree will be conferred at the annual Commencement in June of any year on those candidates only who shall have made written application to be considered as such on or before February first preceding and shall have fulfilled all the conditions here specified at least one week before Commencement, at which time the academic year shall be regarded as ending for the purposes of Rule 2. The degree may also be conferred at the beginning of the second semester.

The Graduate School of Geography

STAFF

WALLACE W. ATWOOD, PH.D., Professor of Physical and Regional Geography and Director of the Graduate School of Geography.

ELLEN C. SEMPLE, A.M., Acting Professor of Anthropogeography.

LAWRENCE MARTIN, PH.D., Acting Professor of Historical and Political Geography, 1922-23.

CHARLES F. BROOKS, PH.D., Associate Professor of Meteorology and Climatology.

STANISLAUS T. J. NOVAKOVSKY, PH.D., Associate Professor of Economic Geography.

OLIVER E. BAKER, PH.D., Professorial Lecturer in Agricultural Geography of North America.

PRESTON E. JAMES, A.M., Instructor in Geography.

DOUGLAS C. RIDGLEY, M.S., Lecturer in Geography.

HELEN G. THOMAS, A.B., Lecturer in Geography, Summer School.

CLARENCE F. JONES, A.B., Lecturer in Economic and Commercial Geography, Summer School, 1923.

CURTIS F. MARBUT, PH.D., Special Lecturer on Soils of North America.

HOMER L. SHANTZ, PH.D., Special Lecturer on Natural Vegetation of North America

HARRY N. WHITFORD, PH.D., Special Lecturer on Forests of North America.

OTHER MEMBERS OF THE UNIVERSITY STAFF OFFERING CLOSELY RELATED WORK

GEORGE H. BLAKESLEE, PH.D., Professor of History and International Relations.

HARRY E. BARNES, PH.D., Professor of the History of Thought and Culture.

HOMER P. LITTLE, PH.D., Professor of Geology.

GENERAL STATEMENT

During the last few years the American people have been awakened, in a remarkable way, to an interest in Geography. The period of isolation in national development is passed, and we have come to realize, almost suddenly, that the United States of America is one of the leading nations of the world and vitally interested in almost everything that is going on in the world.

This awakening, and the consequent broadening of our horizon, have forced us to recognize that we have neglected in this country the scientific study of Geography. Many of the universities and colleges of this country are now calling for trained geographers. Commissioners of education, normal schools, and high schools are looking for men or women who can serve as supervisors or as special teachers of Geography. The large financial houses are endeavoring to train men in commercial Geography in their own schools. The Departments of the Government are now using trained geographers, and the Civil Service Commission has recently recognized the profession of Geography. No one should enter consular or diplomatic service who has not been trained in the geography of this country and in the geography of the world. The intelligent reading of current literature is demanding a greater and greater knowledge of the peoples and of the conditions in distant lands.

In the Graduate School of Geography opportunities are given to properly qualified students to secure special training in Geography. The staff is composed of experts in the various fields of Geography. They must of necessity spend a portion of their time in travel and in field studies, but while in residence, they offer regular courses of instruction and direct advanced students in research work. It is not the intention to offer all courses of instruction each year; many of them are given once in two years. Abundant opportunities for instruction are provided, but graduate students should not burden themselves by attending too many lecture courses. They must depend very largely for their growth upon their individual efforts in the pursuit of research work, under the direction of members of the staff.

THE GRADUATE SCHOOL OF GEOGRAPHY

CLARK UNIVERSITY

Announcement of Courses for the Second Semester, February 5 to June 11, 1923

GRADUATE SCHOOL OF GEOGRAPHY

A new, advanced course in the Geography of North America is now being offered in the Graduate School of Geography. It is the outgrowth of the successful experiment of the spring of 1922 in having several specialists in geography come to Clark University to present series of lectures. Dr. W. W. Atwood, the President of the University, will open the course, using the first month of the second semester to present the physiographic regions of North America. Dr. C. F. Brooks, Associate Professor of Meteorology and Climatology in Clark University, will follow with a month on the climates of the continent. Then will come in successive fortnights, beginning April 9th, Drs. Marbut, Shantz, and Baker, of the U. S. Department of Agriculture. Dr. C. F. Marbut, Chief of the Soil Survey, U. S. Bureau of Soils, will discuss the soils of North America; Dr. H. L. Shantz, U. S. Bureau of Plant Industry, who for many years has studied the vegetation of potential homestead lands in the west, will consider the natural vegetation, and Dr. Baker, Chief of the

Division of Agricultural Geography, U. S. Bureau of Markets, will discuss the utilization of the land, or the agricultural geography of North America. Each of these visiting specialists from the U. S. Department of Agriculture will give eight lectures during two weeks. A special effort will be made to coordinate the phases covered by the several lectures. The first meeting of the course will be on Monday, February 5, 1923, at nine a. m., in the lecture room in the Geography Building. If this hour proves satisfactory, the course will continue on Mondays, Wednesdays and Fridays, at nine.

The full list of courses to be offered in the School of Geography during the second semester is as follows:

PRIMARILY FOR UNDERGRADUATES

1. **Principles of Geography**, (continued from 1st semester). Factors in the settlement and development of Worcester. Population centers and their tributary areas, discussed from the point of view of explaining where, why, and how people live. Principles of physiography, climatology, political and economic geography. Distribution of basic raw materials. Laboratory work in addition to class meetings. Indivisible course. M. W. F., 10.00 a. m., through the year.

MR. P. E. JAMES in charge.
(over)

FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

242b. Geography of South America. A resumé of the larger topographic features followed by a detailed study of the continent, the natural regions, land surface, climate, and natural resources—the reaction of the inhabitants to their environment measured against heredity and historical influences. Laboratory work in addition to class meetings.

M. W. F., 11.00 a. m.

MR. P. E. JAMES

272b. Economic Geography of Europe. This course will discuss the distribution of the natural resources, and the geographic factors which have influenced their utilization. All the countries of Europe will be covered.

First meeting Monday, Feb. 5, at 3.00 p. m., subsequent meetings to be arranged, perhaps for T. T. S., 10.00 a. m.

DR. S. NOVAKOVSKY

271b. Economic Geography of Asia. This course will cover the topography, climate, natural resources, routes of transportation, and the utilization of these by the inhabitants in the divisions of Asia.

M. W. F., 12 m.

DR. S. NOVAKOVSKY

261b. Geography in Education. A survey of geography work in the American elementary school, high school, and teacher-training institutions; problems of the training and the supervising of teachers of geography; principles underlying the curriculum in geography. Various methods of teaching geography, educational tests, standard geographic equipment, library. Local field trips.

M. W. F., 4.00 p. m.

MR. D. C. RIDGLEY

PRIMARILY FOR GRADUATE STUDENTS

3b. Geography of North America. (See announcement above)
M. W. F., 9 a. m.,

MESSRS. ATWOOD, BROOKS, MARBUT, SHANTZ AND BAKER.

312b. Physiography of the United States. An intensive and critical study of the physiographic evolution of land forms in each of the natural regions of this country for students who wish to secure special training in physiography and who are familiar with the principles of Geology and Physiography.

M. W. F., 3.00 p. m., or at other hours to be arranged.

DR. W. W. ATWOOD

322b. Climatology and Climates of the World. The principles of climatology, followed by a comparison of the major types of climatic environment found in different parts of the world; e. g., solar, continental, marine, and mountain climates. The climatic factor in White Man's distribution and migrations. His adaptability to unfavorable climates.

1st meeting Monday, Feb. 5, at 2.00 p. m. Subsequent meetings to be arranged, perhaps for T. T. S., at 9.00 a. m.

DR. C. F. BROOKS

311b. Seminar in Geography. Round-table discussion will be conducted for the graduate students of geography, and recent publications will be reviewed. Students will also present portions of their thesis work from time to time.

Second semester. Hour to be selected.

DR. ATWOOD

312. Research in Regional Geography.

DR. ATWOOD

321. Research in Meteorology or Climatology.

DR. BROOKS

341. Research in the Geography of South America.

MR. JAMES

Hours to be selected.

Advanced studies in History, Economics, and Sociology, as well as a reading knowledge of the modern languages are important to all students of Geography, and the attention of such students is called to the announcements in those several departments. The map collection and the Library offer unusual facilities for research work in residence, but it is hoped that all graduate students, before completing their University work, may undertake field studies.

The aim in conducting the graduate school of Geography is to promote in every way possible productive scholarship and to train those who wish to enter the profession to become leaders in their chosen fields of work.

A complete statement regarding tuition and expenses, Fellowships and Scholarships, and general conditions of work will be found on pages 21-26.

COURSES IN GEOGRAPHY*

(in 1922-23) 1. PRIMARILY FOR UNDERGRADUATES

141. [^]PRINCIPLES OF GEOGRAPHY. A study of the local Geography—the factors influencing the settlement and development of Worcester—is followed by a broader treatment of New England and other regions, their peculiar types of geographic environment and life response. In this way the main types of geographic environment are studied in detail; and, as the course progresses, the fundamental principles of Physiography, Climatology, and Economic Geography are developed. Indivisible course.

Three hours, through the year.

MR. JAMES, 1922-23

121a. THE PASSING WEATHER. This course covers the field of the usual college course in Meteorology in a novel way. The principles of Meteorology are discovered through detailed, daily observations and explanations of the passing weather rather than presented in the usual sequence in lectures supplemented by regularly progressive text-book assignments. At the same time, an

*Plans are being made for additional instructional work in Economic and Commercial Geography but at the time of going to press the negotiations are not completed.

understanding of the principles of weather forecasting and an ability to forecast the local weather are gained by each member of the class individually in facing the daily problem, "What will the weather be tonight and tomorrow, and how do you reach your conclusions?" At the end of the course a systematic summary of Meteorology is presented, and the work of the U. S. Weather Bureau, and the manifold applications of Meteorology, especially in agriculture, aeronautics, engineering, and public health, are discussed.

Three hours, first semester.

MR. BROOKS

Omitted in 1922-23. To be offered 1923-24.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

231a. GENERAL PRINCIPLES OF ANTHROPOGEOGRAPHY. This course considers the operation of geographic factors in the economic, social and political development of peoples; the influences of location, area, relief, coastline, drainage systems, climate, and other geographic conditions, both separately and in their mutual interplay. Ellen C. Semple's *Influences of Geographic Environment* will be used as a text.

Three hours, first semester.

MISS SEMPLE

Omitted 1922-23 To be offered 1923-24.

232a. GEOGRAPHY OF EUROPE. This course includes a study of the climate, relief, coast line and marginal seas of the continent as a whole, to be followed by a detailed consideration of the economic and political geography of the Western European states.

Tuesdays, 3-5, first semester.

MISS SEMPLE

Omitted 1922-23. To be offered 1923-24.

233a. THE GEOGRAPHY OF THE MEDITERRANEAN REGION, ESPECIALLY IN RELATION TO ANCIENT HISTORY. Lectures and assigned readings. A geographic interpretation of ancient history in Mediterranean lands, embracing a study of the various geographic factors operative in the countries bordering this enclosed sea under the peculiar influences of the Mediterranean climate, at a time when the Mediterranean region constituted most of the known world. The lectures discuss the intercontinental location

234a Weather + Meteorol. Physics
3 hrs?

Brooks

of the Mediterranean Sea, the barrier boundaries and the breaches in the same, the size, shape, and subdivisions of this marine basin, its relation to the Atlantic Ocean as also to the Red and Black Seas; the prevailing mountainous relief of Mediterranean lands, highly articulated coasts, peninsulas, islands, and continental hinterlands, rivers and river valleys; rainfall, temperatures, and winds; and finally, the effect of these various geographic conditions upon ancient agriculture, stock raising, forestry, industry, navigation, trade, and colonization.

Three hours, first semester.

MISS SEMPLE

Not to be offered 1923-24.

236a. GEOGRAPHY OF PALESTINE. An anthropogeographical study of the Holy Land, with reference to the influence of its location, climate, relief, and soil upon ancient Hebrew life and religion. This course is designed for students of ancient history and of the Bible. Lectures and assigned reading.

One hour a week in afternoon, first semester. MISS SEMPLE.

Not to be offered 1923-24.

241a. GEOGRAPHY OF NORTH AMERICA. The physical environment of North America is the subject of this course. The natural regions of the continent and the fundamental basis for their subdivision, the climates, their causes and effects, and a review of the major natural resources of each region are presented. Finally the present distribution of population, industry, and culture are discussed, together with the geographic factors which have influenced their location and development. A certain amount of laboratory work is required in addition to the three regular class meetings each week.

Three hours, first semester.

MR. JAMES

Not to be offered 1923-24. See course 311b, Page 52.

242b. GEOGRAPHY OF SOUTH AMERICA. This course treats the physical setting of the South American continent and its relation to North America and the rest of the world. The relation to the climatic zones, and a résumé of the larger topographic features is followed by a more detailed study of the continent, in which the division into natural regions forms the basis of study. The three factors in environment—land surface, climate, and

natural resources—are covered for each region, and the reaction of the inhabitants to their environment is measured against hereditary and historical influences in the explanation of present-day conditions. Comparison with familiar points in the United States are made frequently throughout. A certain amount of laboratory work is required in addition to the three regular class meetings each week.

Three hours, second semester.

MR. JAMES

261b. GEOGRAPHY IN EDUCATION. A survey of geography in the present-day American school system, including elementary school, high school, teacher-training institutions, colleges, and universities; examination and comparison of present courses of study in each group of schools; problems of high school and normal school Geography emphasized; designed to meet the needs of those expecting to teach Geography.

Three hours, second semester.

MR. RIDGLEY

271b. ECONOMIC GEOGRAPHY OF ASIA. This course covers the topography, climate, natural resources, routes of transportation, and the utilization of these by the inhabitants in the following divisions of Asia: Siberia, Russian Turkestan, Eastern Turkestan, Tibet, Mongolia, Manchuria, Russian Far East, Japan, Korea, Formosa, China, Indo-China.

Three hours, second semester.

MR. NOVAKOVSKY

Omitted 1923-24.

(3b in 1922-23) 3. PRIMARILY FOR GRADUATE STUDENTS

311b. GEOGRAPHY OF NORTH AMERICA. This new, advanced course in the Geography of North America is the outgrowth of the successful experiment of the spring of 1922 in having several specialists in geography come to Clark University to present series of lectures. Dr. W. W. Atwood, the President of the University, opens the course, using the first month of the second semester to present the physiographic regions of North America. Dr. C. F. Brooks, Associate Professor of Meteorology and Climatology in Clark University, follows with two weeks on the climates of the continent. Dr. H. N. Whitford, of Yale Forest School, will then present a week's series of lectures on the forests of North America, especially

261a Geog. and Foreign Service

Martin

9 Tu. Th. 1st Sem

272b Ec. Geog. of Europe

Novakovsky

10 Tu. Th. S.

those of the tropics. Then come in successive fortnights, beginning April 9th, Drs. Marbut, Shantz, and Baker of the U. S. Department of Agriculture. Dr. C. F. Marbut, Chief of the Soil Survey, U. S. Bureau of Soils, will discuss the soils of North America; Dr. H. L. Shantz, U. S. Bureau of Plant Industry, who for many years has studied the vegetation of potential homestead lands in the west, will consider the natural vegetation, and Dr. Baker, Chief of the Division of Agriculture Geography, U. S. Bureau of Markets, will discuss the utilization of the land, or the agricultural geography of North America. Each of these visiting specialists from the U. S. Department of Agriculture, gives eight lectures during two weeks. A special effort is made to coordinate the phases covered by the several lectures.

Second Semester. 9MWF

MESSRS. ATWOOD, BROOKS, WHITFORD, MARBUT, SHANTZ AND BAKER.

To be offered in 1923-24 as a course extending throughout the year, with Dr. Baker in charge the second semester. He will describe the agriculture of North America north of Mexico and the influence of physical and economic conditions in directing its development. The description will proceed by regions, subdivided into areas and these into districts, and, after a brief review of the physical conditions, will include a discussion of the crops, live stock, systems of farming, land tenure, and the composition and characteristics of the rural population.

392. LAND UTILIZATION IN THE UNITED STATES. This course will outline the physical and economic conditions which determine the utilization of land for crops, pasture and forest; describe the geographic distribution of such lands; consider the probable need of these classes of land as population increases, and the possibilities of meeting this need by irrigation, drainage, clearing, more intensive cultivation, and other means; closing with a discussion of a national land policy.

New course to be offered 1923-24.

MR. BAKER

322b. CLIMATOLOGY AND CLIMATE OF THE WORLD. Climatology, which is the first third of this course, provides a systematic

basis for studying particular climates. The making, reduction and graphical presentation of observations for a single place, and the tabulation, reduction and mapping of climatic data for appreciable areas, give the student both a knowledge of how to handle climatic data, and an appreciation of the basis and limitations of climate tables and maps. The climatic environments of the world are studied in a comparative way, to bring out particularly the peculiarities of each climate and its effect on man as compared with its group types. Attention is given the climatic factor in White Man's distribution and in his migrations past and present. Acclimatization is considered particularly with regard to the development of tropical and polar regions.

Second semester. *9-10-11-12-13*

MR. BROOKS.

To be offered in first semester, 1923-24.

added 1922-23?
312b. PHYSIOGRAPHY OF THE UNITED STATES. This course is an intensive and critical study of the physiographic evolution of land forms in each of the natural regions of this country. It is planned for those students who wish to secure special training in Physiography and who are sufficiently familiar with the principles of Geology and Physiography to review all important contributions to this field of study.

Second semester.

MR. ATWOOD

331a. SEMINAR FOR ANTHROPOGEOGRAPHY. Themes for investigation and discussion will be assigned to the seminar group as a whole, each week for the first two months. Later such themes will be assigned to individuals, with a special view to training in the inductive methods of research.

Meetings at convenience of instructor and students.

First semester. *11-12-13*

MISS SEMPLE

311b in 1922-23
313b. SEMINAR IN GEOGRAPHY. Round-table discussions will be conducted for the graduate students of geography, and recent publications will be reviewed. Students will also present portions of their thesis work from time to time.

2d in 1922-23
Second semester. *11-12-13*

MR. ATWOOD

313. RESEARCH IN REGIONAL GEOGRAPHY.

MR. ATWOOD

second sem 2:30-4 M & F
321. RESEARCH OR ADVANCED WORK IN METEOROLOGY OR CLIMATOLOGY.

MR. BROOKS

the people 2nd Sem.

341. ^{and Sem.} RESEARCH IN THE GEOGRAPHY OF SOUTH AMERICA.
Not to be offered in 1923-24. MR. JAMES
391. RESEARCH IN AGRICULTURAL GEOGRAPHY. MR. BAKER
New course. To be offered 1923-24.
381. ^{1:45 Wed for New.} RESEARCH IN ECONOMIC AND COMMERCIAL GEOGRAPHY.
HOME STUDY COURSES IN GEOGRAPHY

There are many teaching geography in the schools of this country who have not had an opportunity to receive adequate special instruction in this field of work. During the last few years there have been notable developments in the methods used in the teaching of geography and notable changes in the political geography of the world. The human point of view should now dominate in all of the instructional work done with children; the subject should broaden the knowledge and world sympathies of the American people, and it is necessary for all teachers of geography who wish to be abreast of the times to carry on in some way their own study and training.

The University wishes to extend its services as widely as possible for the betterment of the teaching of geography, and therefore, in addition to the regular resident courses and the Summer School work will offer a series of Home Study Courses. Mr. D. C. Ridgley, formerly of the Illinois State Normal University, is in immediate charge of this work.

COURSES NOW READY

THE PASSING WEATHER.
CLIMATOLOGY AND CLIMATES OF THE WORLD.
THE TEACHING OF GEOGRAPHY IN THE ELEMENTARY GRADES.
INDUSTRIAL AND COMMERCIAL GEOGRAPHY.
GEOGRAPHY OF SOUTH AMERICA.
SPECIAL STUDIES IN GEOGRAPHY FOR ADVANCED STUDENTS.

COURSES IN PREPARATION

(Probably all ready by September 15, 1923)

GEOGRAPHY OF NORTH AMERICA.
GEOGRAPHY OF EUROPE.
GEOGRAPHY OF EASTERN CONTINENTS.
PHYSIOGRAPHY.

CREDITS AND TUITION

Each course when satisfactorily completed carries a college credit of three semester hours. That is, each course is the equivalent of a college course taken in residence, meeting three times per week for one semester of 18 weeks. Each course consists of 36 written lessons. In general, the preparation and the writing of each lesson will require about four or five hours.

The tuition for each course is eighteen (\$18.00) dollars, payable at the time of enrollment. A course may be begun at any time, but it should be completed within 12 months.

Further information about these courses will be sent upon the receipt of a request. Address all communications to Clark University, Home Study Courses, Worcester, Mass.

The Summer School

The plan of the session of 1923, which begins July 2 and ends August 10, is essentially the same as that of last year. Geography and History constitute the chief departments of instruction, while courses are offered also in Biology, Education, English, French, Spanish and German.

Qualified students are admitted upon presentation of proper credentials. Both undergraduate and graduate work is offered, and credit awarded accordingly. Work done in the Summer School may be counted, subject to the regulations of the Collegiate and Graduate Boards and of the various departments of the University, toward fulfillment of the requirements for the Bachelor's degree and advanced degrees of Clark University.

The tuition charges at present are twenty, thirty, or forty dollars per session, according to the number of courses taken. Rooms in the vicinity of the University cost from three dollars a week up, and the University Dining Hall will provide board this summer at about \$7.00 per week.

The Summer School Bulletin, containing detailed information about the coming session, with description of the various courses, may be had upon application to the Director of the Summer School, Clark University, Worcester, Mass.

The names of the students who attended the session of 1922 will be found incorporated in the register with the designation "ss," beginning on page 127 of this Catalogue. The Instructional and Administrative Staff for the session of 1923 is as follows:

WALLACE WALTER ATWOOD, PH.D.	Geography
President of Clark University and Director of the Graduate School of Geography.	

CHARLES BREWSTER RANDOLPH, PH.D.	
(Professor of German, Clark University) Director of the Summer School.	

HELEN GOSS THOMAS, A.B.	Geography
Formerly Instructor in Geography, Wellesley College.	

CHARLES FRANKLIN BROOKS, PH.D.

Meteorology and Climatology

Associate Professor of Meteorology, Clark University.

DOUGLAS CLAY RIDGLEY, M.S.

Geography

Lecturer in Geography, Clark University.

CLARENCE FIELDEN JONES, B.S.

Geography

Assistant in Geography, University of Chicago.

THEODORE COLLIER, PH.D.

History

Professor of History, Brown University.

HOWARD ROBINSON, PH.D.

History

Professor of History, Carleton College.

KENNETH STILLMAN RICE, SC.M.

Biology

Assistant Professor of Biology, Clark University.

VLADIMIR TRIPHON DIMITROFF, A.M.

Biology

Instructor in Biology, Clark University.

KIMBALL YOUNG, PH.D.

Education

Assistant Professor of Psychology, Clark University.

LORING HOLMES DODD, PH.D.

English

Professor of English, Clark University.

ROBERT STANLEY ILLINGWORTH, A.B.

English and Dramatics

Professor of Public Speaking, and Director of Dramatics, Lafayette College.

PHILIP HUDSON CHURCHMAN, PH.D.

French and Spanish

Professor of Romance Languages, Clark University.

THEKLA HODGE

German

Head of the Department of Modern Languages, Athol High School.

CAREY EYSTER MELVILLE, A.B.

(Associate Professor of Mathematics and Registrar, Clark University) Registrar of the Summer School.

DOROTHY ANNETTE DUGGAN

Secretary to the Director.

COURSES OF INSTRUCTION

Courses marked with an asterisk may be taken for graduate credit. All courses meet five times a week, with class periods of fifty minutes each.

GEOGRAPHY

SS122. THE PASSING WEATHER. MR. BROOKS.

SS141. PHYSICAL GEOGRAPHY (introductory course). MR. ATWOOD.

SS162. LOCAL FIELD GEOGRAPHY. MR. RIDGLEY.

SS181. ECONOMIC AND COMMERCIAL GEOGRAPHY. MR. JONES.

*SS213. THE REGIONAL TREATMENT OF GEOGRAPHY. MR. ATWOOD.

*SS224. CLIMATIC ENVIRONMENTS. MR. BROOKS.

SS253. HUMAN GEOGRAPHY FOR THE ELEMENTARY GRADES. MRS. THOMAS.

*SS252. THE GEOGRAPHICAL CHANGES RESULTING FROM THE WORLD WAR. MRS. THOMAS.

*SS261. THE TEACHING OF GEOGRAPHY IN NORMAL SCHOOLS AND NORMAL TRAINING COLLEGES. MR. RIDGLEY.

SS282. ECONOMIC GEOGRAPHY OF NORTH AMERICA. MR. JONES.

*SS313. RESEARCH IN REGIONAL GEOGRAPHY. MR. ATWOOD.

*SS323. RESEARCH IN CLIMATOLOGY. MR. BROOKS.

HISTORY

*SS10. A SURVEY OF CONTEMPORARY EUROPE. MR. COLLIER.

*SS11. EUROPEAN HISTORY, 1660-1914. MR. COLLIER.

*SS12. HISTORY OF MODERN ENGLAND. MR. ROBINSON.

*SS13. HISTORY OF ANCIENT AND MEDIEVAL CIVILIZATION. MR. ROBINSON.

BIOLOGY

SS1. EVOLUTION. MR. RICE.

SS2. BACTERIOLOGY. MR. DIMITROFF.

EDUCATION

SS5. EDUCATIONAL PSYCHOLOGY. MR. YOUNG.

SS6. EDUCATIONAL SOCIOLOGY. MR. YOUNG.

ENGLISH

SS5. DRAMATICS: PRODUCING OF PLAYS IN SCHOOLS AND COLLEGES. MR. ILLINGWORTH.

- SS6. MODERN DRAMA IN ENGLISH. MR. DODD.
- SS7. A DECADE OF BIOGRAPHY AND LETTERS. MR. DODD.
- SS8. ORAL AND WRITTEN COMPOSITION. MR. ILLINGWORTH.

FRENCH

- SS1. ELEMENTARY FRENCH. MR. CHURCHMAN.
- SS2. INTERMEDIATE FRENCH. MR. CHURCHMAN.
- SS3. ADVANCED PRONUNCIATION OF FRENCH. MR. CHURCHMAN.
- SS4. AIMS AND METHODS OF TEACHING FRENCH. MR. CHURCHMAN.
- SS5. FRENCH DRAMA OF THE 19TH CENTURY. MR. CHURCHMAN.

SPANISH

- SS1. ELEMENTARY SPANISH. MR. CHURCHMAN.

NOTE. The combined offerings in French and Spanish will be limited to two courses, unless a large demand should justify an increase in the instructing force. An early indication of preference by prospective students will aid in the final selection from the courses listed.

GERMAN

- SS1. ELEMENTARY GERMAN. MRS. HODGE.
- SS2. GRAMMAR REVIEW AND READING OF GERMAN PROSE. MRS. HODGE.

The Library

LOUIS N. WILSON, *Librarian*

EDITH M. BAKER, *Assistant Librarian*, HELEN J. ELLIOT,
Cataloguer, RUTH PROCTOR, EDITH L. SAWYER, LOUISA

J. STANFORD, DOROTHY J. WILLIAMS, *Assistants*

EDMUND B. TOWNE, JOHN H. WUORINEN, *Student Assistants*

The Library under the terms of Mr. Clark's will received one quarter of his estate for the "support and maintenance of a University Library." Thus the Library is well endowed and is able to provide amply for the needs of all departments.

The Library Building is situated on the corner of Main and Downing Streets. A full description of the building and of the Proceedings at the Public Opening which was held January 14, 1904, will be found in the Publications of the Clark University Library for April 1904 (Vol. 1, No. 3).

The Library contains over 100,000 bound volumes and pamphlets, and the reading room receives over 500 journals.

The books are grouped as follows:

A Works of General Reference	L Biography
B Journals	M Anthropology
C Mathematics	N Education
CD Mathematics-Physics	O General Science
D Physics	P History
DE Physical Chemistry	R Political and Social Science
E Chemistry	Economics
F Biology, Zoölogy, Botany, Physiology, Neurology.	S English
G Geography	T Modern Languages
H Pathology	U Classics
I Psychology	W Practical Arts
J Philosophy	X Library Science
K Religious Psychology	Y Art
	Z European War

Tuesday and Friday mornings, each week, all books recently added to the Library are placed upon a table in the reference section where they remain for three days. This affords the members of the University an opportunity to examine the new books in all

departments before they are placed upon the shelves for circulation.

Particular attention is paid to the needs of students engaged in research work. The Library already possesses a good collection of complete sets of the best scientific periodicals. It makes liberal purchases for individual needs and supplements these by drawing upon the resources of the older and larger libraries through the inter-library loan system. The number of books added each year is about four thousand volumes.

The books in the Art Department are accessible on application to the Librarian, but, by the terms of the Founder's will, they cannot be taken from the building.

All the privileges of the Library are open to all members of the University, and each member has direct access to every book and journal.

The Library is open from 8 a. m. to 10 p. m. each week day, except on legal holidays, during term time and during the Summer School session.

ART DEPARTMENT

In his last will and testament the Founder of the University bequeathed

"the sum of \$100,000, as an endowment fund for the Art Department of said University, and said sum is to be held and kept sacred and intact as a principal not to be used or expended under any conditions; but the income, interest or proceeds thereof shall be used only in putting and keeping said works of art or others given or obtained for said department in good condition and in taking care of them; and then if there is a surplus of the income of said fund left, I will and direct that it be used in the purchase of additional works of art or of such matters as will add to the usefulness and efficiency of said Art Department."

Under these conditions a large room has been furnished and equipped on the upper floor of the Library Building. Upon the death of Mrs. Clark, those of the Founder's collections that were deemed most suitable for this purpose were arranged and displayed in this room, together with his most valuable books, which, by the conditions of the will, cannot be removed from the building. A complete catalogue of these books and paintings has been published in the Publications of the Library, Vol. 2, No. 1.

The Art Department is open daily (except Sundays and holidays) from 9 a. m. to 5 p. m.

Four portraits and one landscape painting have been added to the collection:

1909. Portrait of the late Carroll D. Wright, president of the Collegiate Department from 1902 to 1909, by the late Frederick P. Vinton of Boston. This painting was awarded the Temple Gold Medal at the 1909 Exhibition of the Pennsylvania Academy of Fine Arts.

1911. Portrait of G. Stanley Hall, president of Clark University from 1888 to 1920, by the late Frederick P. Vinton of Boston.

1913. Landscape painting, "Snowing," by Joseph H. Greenwood of Worcester.

1914. Portrait of Edmund C. Sanford, president of Clark College from 1909 to 1920, by Joseph De Camp of Boston.

1921. Portrait of Augustus George Bullock, member of the Board of Trustees since 1901 and president of the Board from 1905 to 1919, by Leslie P. Thompson of Boston.

To commemorate the twenty-fifth anniversary of the University the Board of Trustees, early in 1914, commissioned Mr. Victor D. Brenner of New York to prepare a medal to mark that event. The medal is made of bronze and is three inches in diameter. On the obverse is delineated the head of President G. Stanley Hall, and on the reverse a beautiful allegorical group symbolizing the spirit of the University and the legend,

"Knowledge is proud that he has learned so much,
Wisdom is humble that he knows no more."

Scale models of the buildings and the University grounds have been made by T. J. McAuliffe and Son of Worcester, under the direction of the architects, Messrs. Frost and Chamberlain.

Departmental Announcements and Lists of Courses

Courses offered by the several departments are listed under three headings:

1. PRIMARILY FOR UNDERGRADUATES, designated by numbers beginning with the figure (1).
2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS, designated by numbers beginning with the figure (2).
3. PRIMARILY FOR GRADUATE STUDENTS, designated by numbers beginning with the figure (3).

All courses listed have been given during the current academic year unless a statement to the contrary is made.

Credit for the first semester alone will be given in all courses except those which are stated to be indivisible.

Any course may be entered at the beginning of the 2nd semester by students who are prepared to take up the work of the course at that time.

DEPARTMENT OF ANCIENT LANGUAGES

PROFESSOR BRACKETT

All courses in Greek and Latin are designated primarily for undergraduates. To any of these courses, however, properly qualified graduate students may be admitted by special permission.

GREEK

Provision is made in the Courses in Greek both for students who have previously studied Greek in the high school, and for those who wish to begin the subject in college. In admitting students to the College full credit is given for one, two, or three years of high school Greek. Those who have pursued successfully the study of Greek for two or three years may enter di-

rectly into course 11. Students who purpose to study Greek in college are strongly advised to take this subject in the preparatory school for two years if possible. The department recommends that these two years be devoted first to the elements of the language, and then either exclusively or principally to the reading of Attic prose (either the *Anabasis* of Xenophon, or prose selections such as are found in Colson's *Greek Reader*). Students who have had but one year of Greek may continue the subject in college by entering Greek 14 at the beginning of the second semester.

For a *major* in Greek the requirement is twenty-four hours from the courses described below, of which at least eighteen must be in Greek.

The first semester of History 19 is a requirement for students electing Greek as a *major*. The *minor*, which may include History 19, may be taken in either Latin, English, German or Romance Languages.

Attention is called to the fact that some acquaintance with Greek life and thought may be gained by students who have no knowledge of the Greek language in Greek 16 (Greek Tragedy in English) and History 19 (History of Greece and Rome). Greek 16 may be taken as part of a *minor* when a student's *major* is in English, German, or Romance Languages.

LATIN

Since a substantial number of students are admitted to the college who have not previously studied Latin, the department offers to such students an opportunity to take an introductory course in this subject.

For a *major* in Latin the requirement is twenty-four hours from the courses described below, of which at least eighteen hours must be in Latin. The remaining six hours may be in Greek (except Greek 16) or in History 19. The second semester of History 19 is required of all students who take a *major* in Latin.

COURSES IN GREEK

1. PRIMARILY FOR UNDERGRADUATES

11. (14, in 1921 Catalogue.) FIRST YEAR COURSE. The purpose of this course is to furnish to mature students who have

never studied Greek an opportunity to begin this subject in college. The course not only has in view the needs of students of theology and language, but in connection with the use of Greek in scientific nomenclature should have value for students of science as well. Indivisible course.

Open to Freshmen.

Three hours, through the year.

PROFESSOR BRACKETT

Omitted in 1922-23.

12. (11, in 1921 Catalogue.) PLATO, *Apology*; HOMER, *Iliad*. In the first part of the first semester Plato's *Apology of Socrates* is read, and the work centers about the life, character, and later influence of Socrates. The remainder of the year is devoted to a study of the *Iliad*. The aim in this work is distinctly literary, and such selections are read as will enable the student to gain as far as possible an intelligent appreciation of the poem as a whole.

Open to Freshmen.

Three hours, through the year.

PROFESSOR BRACKETT

13. (12, in 1921 Catalogue.) THE GREEK DRAMA. Aeschylus, *Prometheus Bound*; Sophocles, *Oedipus Tyrannus*; Euripides, *Hippolytus*. This course is designed to give a general view of Greek tragedy. Lectures or discussions deal with the staging of a Greek play, the origin and development of the drama, and the other works of the authors read. The best translations and imitations of the plays read are indicated, and may be assigned for private reading. Three or four plays of each of these authors are read in translation and discussed in class.

Three hours, through the year.

Omitted in 1922-23.

14. (13, in 1921 Catalogue.) HERODOTUS; Lyric Poetry; THEOCRITUS.

Three hours, through the year.

Omitted in 1922-23.

15a. NEW TESTAMENT (*Gospel of Luke*). The purpose of this course is, upon the basis of an accurate reading of the text, to make a careful objective study of the content of the narrative. Such an amount of attention is devoted to the language as is

necessary for an accurate understanding of the subject matter. The course is open only to those who have completed Greek 11, except by special permission.

Three hours, first semester.

Omitted in 1922-23.

16. GREEK TRAGEDY IN ENGLISH. This course deals with Greek tragedy as represented in the extant works of Aeschylus, Sophocles, and Euripides. All the reading is done in English translations, for the most part in verse. The central aim of the course is an intelligent and appreciative reading of the plays. Much attention is devoted to the connection between Greek and modern drama. The instructor will deal, in lectures, with the origin and development of Greek tragedy, the Greek theatre and related subjects, and Aristotle's theories concerning tragedy.

Three hours, first semester.

PROFESSOR BRACKETT

Omitted in 1922-23.

COURSES IN LATIN

1. PRIMARILY FOR UNDERGRADUATES

11. (14, in 1921 Catalogue.) FIRST YEAR COURSE. This course is designed to give men who have never studied Latin an opportunity to learn some of the essentials of the subject in college. It is conducted entirely with reference to the needs of the average student and with emphasis on the practical usefulness of an acquaintance with Latin in everyday life. Some time is devoted to study of the derivation of English words. Indivisible course. Open to freshmen.

Three hours, through the year.

PROFESSOR RANDOLPH

12. (11, in 1921 Catalogue.) Cicero, *de Amicitia*; CATULLUS, Selections; Horace, Selections from the Odes. The year is about equally divided between the three authors. In connection with the work in Horace and Catullus metrical translation is encouraged, and some of the more famous poems are committed to memory.

Open to freshmen.

Three hours, through the year.

PROFESSOR BRACKETT

13. (12, in 1921 Catalogue.) PLAUTUS AND TERENCE. At least three plays of each of these authors are read. Ancient comedy, Greek and Latin, is discussed, and the writings of Plautus and Terence are compared.

Three hours, through the year.

Omitted in 1922-23.

14. (13, in 1921 Catalogue.) LETTERS OF CICERO AND PLINY; SELECTIONS FROM THE *Satires* AND *Epistles* OF HORACE, AND FROM JUVENAL. The greater part of the first semester is devoted to the letters of Cicero, with a study of his life, writings and influence; during the latter part of the semester the most interesting letters of Pliny are read. In the second semester selections from Horace and Juvenal are read with particular attention to the information they contain in regard to literary and social conditions under the empire.

Three hours, through the year.

Omitted in 1922-23.

15a. SELECTIONS FROM CÆSAR, CICERO, AND OVID'S *Metamorphoses*. This course is open to students who have had Latin *or its equivalent*. The principal aim to increase the student's ability to read Latin.

Three hours, ~~first semester~~ ~~through the year~~

PROFESSOR BRACKETT

15b. VIRGIL, the *Aeneid*. In this course the controlling purpose is to enable the student, so far as possible, to understand and appreciate the *Aeneid* as literature. The poem will be considered as a whole and the parts which are not read in Latin will be read in selected verse translations.

Three hours, second semester.

DEPARTMENT OF BIOLOGY

ASSISTANT PROFESSOR RICE, MR. DIMITROFF

The courses in biological subjects are designed to meet the needs of four general classes of students.

The first class consists of students who desire to take Biology as a *minor* to supplement other courses or as a general culture subject. Such students may take Biology 11, 14, or 111, or the

required number of hours selected from the other courses with regard to the special requirements of each.

The second class includes those who wish to prepare themselves to study Medicine or Sanitary Science. Students of this class should *major* in Biology or Chemistry. A *major* in Biology requires twenty-four semester hours, which, for premedical students, should include courses 11, 12, 13, and 15. The subjects pursued will then be General Biology, Vertebrate Anatomy, Embryology, Histology, and Physiology. Students preparing to take up the study of Sanitation should add to the premedical subjects course 18, which gives introductory training in Bacteriology.

The third class comprises those who intend to make Biology their profession, who wish to prepare themselves to teach the subject and to become skilled investigators. Such students are advised to select Biology as their *major* and should confer with the instructors in the department before determining their programs.

The fourth class includes those students having adequate preparation who desire to pursue research work in Biology. Opportunity is afforded for instruction, supervised experimental work, and also for independent investigation. The laboratories are equipped with the usual apparatus and materials for instruction and investigation in the biological subjects, and any additional equipment required for special purposes will be provided whenever possible. Conditions are especially favorable with regard to scientific literature. Complete files of nearly all of the important journals in Zoology, Physiology, and Biological Chemistry are in the library, as well as a large number of special works in these and other branches of biological science.

COURSES IN BIOLOGY

1. PRIMARILY FOR UNDERGRADUATES

11. GENERAL BIOLOGY. This course is designed to serve as a practical introduction to more specialized biological courses, and aims to acquaint the student with the elementary forms, forces, and laws of living nature. Types for study are selected so far as possible from common animals and plants which may

be observed alive and functioning under natural conditions. Three lectures and one laboratory period per week.

Open to freshmen.

Three hours, through the year. ASSISTANT PROFESSOR RICE

12. ELEMENTARY PHYSIOLOGY. The fundamental properties of living matter, its composition, organization and behavior, followed by a consideration of the structure and functions of the human body. Biology 11 is prerequisite for this course. Three lectures and one laboratory period per week.

Three hours, through the year. ASSISTANT PROFESSOR RICE

13. COMPARATIVE ANATOMY OF VERTEBRATES. A comparative study of the structure and development of the organs of vertebrate animals, including man, with minor references to the lower forms. This course is designed to meet the needs of prospective students of Medicine and those who intend to specialize in Zoology. The laboratory work consists of the dissection and study of selected examples of vertebrate animals together with assigned reading. Two lectures and two laboratory periods per week.

Three hours, through the year

MR. DIMITROFF

Omitted in 1922-23.

14a. ELEMENTARY BOTANY. This course is offered as an elective for all students and is designed to give a general knowledge of plant life and its relation to human welfare, and also to furnish a basis for further work in Botany. Two lectures and one laboratory period per week.

Open to freshmen.

Three hours, first semester.

MR. DIMITROFF

15. EMBRYOLOGY AND HISTOLOGY. The cellular structure of organisms; the origin of the individual and its development from the egg to the adult; the problems of differentiation and the cytological evidence of heredity. The laboratory work includes an introduction to histological technique and the dissection and study of the early stages of the frog, chick, and pig. Courses 11 and 13 are advised in preparation for this course.

One lecture and two laboratory periods per week.

Three hours, through the year.

16. **ADVANCED PHYSIOLOGY** This course is designed to give a comprehensive knowledge of Animal Physiology. The student works out the chemical tests for food principles, digestive ferments, urine, water, and air analysis, and determination of hæmoglobin. Considerable time is also devoted to the experimental physiology of muscle, nerve, and sense organs, and of respiration and circulation. Two lectures and one laboratory period per week.

Three hours, through the year. ASSISTANT PROFESSOR RICE
Omitted in 1922-23.

18. **BACTERIOLOGY.** The principles of Bacteriology and their application in Medicine, Sanitation, and various agricultural and industrial processes. The laboratory work includes training in general bacteriological technique, the isolation and study of pure cultures, and the bacteriological examination of water, milk, and sewage. Lectures and laboratory work.

Three hours, second semester.

MR. DIMITROFF

111b. **GENETICS.** Theories of organic evolution; the principles of variation, selection, and heredity; the material basis of heredity; Mendelian inheritance and the application of its principles in animal breeding and eugenics. Lectures, assigned readings, and laboratory work, including experiments in animal breeding. Course 11 or 14a is advised in preparation for this course. Two lectures and one laboratory period per week.

Three hours, second semester.

MR. DIMITROFF

2. **FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS**
No courses announced.

3. FOR GRADUATE STUDENTS

314. **BIOLOGICAL SEMINAR.** This course is designed to furnish an opportunity for advanced students in other departments to acquaint themselves with some of the more general aspects of Biology.

DEPARTMENT OF CHEMISTRY

PROFESSOR MERIGOLD

PROFESSOR KRAUS

PROFESSOR WHITE

The instruction offered in Chemistry falls into two main groups:

First, courses intended primarily for undergraduates. These are designed for those who wish to acquire the necessary foundation for professional work in Chemistry and for premedical students who wish to gain that knowledge of Chemistry which is becoming of constantly increasing importance as preparation for the best medical schools. These courses are also intended for those desiring some knowledge of the subject as part of their general education.

Second, courses intended primarily for graduates. These courses offer advanced instruction to students possessing the requisite foundation in Chemistry, Physics, and Mathematics, and afford training in the methods of chemical research. They lead ultimately to the advanced degrees.

UNDERGRADUATE WORK

Students who expect to make Chemistry a profession should *major* in Chemistry and should either take a *minor* in Physics or at least two years' work in that subject. All such students are urged to consult the members of the department of Chemistry in planning their collegiate courses. It is not possible within the limits of a collegiate course leading to the A. B. degree to give sufficient Chemistry to produce a thoroughly trained professional chemist. The student who has taken all of the undergraduate work possible will have sufficient training to enable him to teach Chemistry in secondary schools and should be able to do routine analytical work as a professional chemist. All students who intend to make Chemistry a profession are urgently advised to take at least one additional year of more advanced work in Chemistry.

Students intending to study Medicine should take as much work in Chemistry as possible. Courses 11, 13, 15, and 19 or 110 are essential. Courses 14 and 18 should be included, if possible. In fact, the subject of Physical Chemistry, course 18, is even now required for admission to some of the medical schools and is almost equally essential with the courses before mentioned. Attention is called to the statement regarding premedical courses under the announcement of the Department of Biology.

The attention of all students intending to enter undergraduate courses in Chemistry is called to the matter of the laboratory fees and breakage deposits on page 22

GRADUATE WORK

It is the purpose of the Department of Chemistry to provide the graduate student with that broad training in the fundamental principles of Chemistry which shall adequately equip him for a subsequent scientific career. A considerable number of the students entering this department for graduate work will naturally look forward to an academic career. It is not intended, however, to provide training for such men alone, for the equipment for technical research, whether for public or private interests, requires equally a thorough familiarity with the underlying principles of science and with the methods of experimental investigation. Whether a student shall devote himself to pure or to technical research is a matter of individual interest and inclination rather than of training. The purpose of the department is to provide the training on lines sufficiently broad to enable the student to exercise a choice between technical and purely scientific work.

It is intended that the list of courses primarily for graduate students will be covered in a period of three years.

The requisite preliminary training for the graduate courses include Mathematics through the calculus, at least two years of work in Physics, and the standard undergraduate courses in Chemistry.

LABORATORIES AND EQUIPMENT

The Department of Chemistry occupies the north half of the Science Building, the two lower floors being devoted chiefly to the undergraduate laboratories and the upper floor to the graduate research laboratories. In addition, two rooms in the basement of the Main Building are occupied by the Department as graduate research laboratories.

Separate laboratories are provided for work in general, analytical, organic, and physical Chemistry, in addition to rooms for furnace work, combustions, weighing, preparations, and a dark room for photo-chemical work. The laboratory is well equipped with all necessary apparatus for undergraduate work in

Chemistry, while proximity to the graduate research laboratories renders available for undergraduate use and demonstration some forms of apparatus not ordinarily found in the smaller college laboratories.

The graduate laboratories, which are devoted exclusively to research, are exceptionally well equipped for work in organic, inorganic, and physical Chemistry.

The Department is provided with a shop which is fully equipped for carrying out any mechanical work necessary in connection with the various investigations in progress in the laboratory, and the services of a skilled mechanic are available. The Department also has a very complete equipment of various physical and physical-chemical apparatus to be used in research work, and a very complete supply of material of all kinds.

In addition to the equipment of permanent apparatus available, the Department is always ready to purchase special apparatus or materials as required for research purposes.

Attention is directed to the statement on Page 22 in regard to the deposit required of graduate students in Chemistry.

ADVANCED DEGREES AND RESEARCH

The requirements for advanced degrees cannot be met by the mere pursuit of a course of studies nor by the mere execution of a research. For this reason no definite course of graduate studies is outlined, but the student is expected to carry such courses as will enable him to acquire a comprehensive knowledge of the subject of Chemistry during the course of his residence at the University. In general, the courses of instruction and the research work are designed to enable a student to complete his training in a period of three years, provided, however, that he has the necessary preliminary training prior to undertaking his graduate work and that he possesses the necessary aptitude in his chosen field of work. Students who are not fully prepared for graduate work will be required to make up any deficiencies either before undertaking graduate work or while at the same time taking a limited amount of graduate work. In such cases it is to be expected that the time necessary to obtain an advanced degree will be correspondingly extended.

All students registered for advanced degrees are expected to devote not less than thirty hours per week to laboratory work. In the case of a student working for a Master's degree a portion of his time may be devoted to special laboratory work in organic, inorganic, and physical Chemistry. In the case of students preparing for the Doctor's degree not less than thirty hours per week or five hours per day shall be devoted to research work under such conditions and regulations as may be prescribed by the Director.

Graduate scholarships and fellowships are available for students in this department. See Page 23.

RESEARCH FACILITIES FOR MEN NOT CANDIDATES FOR DEGREES

The facilities of the graduate laboratories are open to such men as have the interest and the ability necessary for undertaking research on their own responsibility. Such men will, in general, already have received the Doctor's degree and will be interested primarily in research for its own sake. It is the purpose of the department to encourage men of this type whenever possible, and every facility will be afforded such investigators for the purpose of carrying out their investigations.

COURSES IN CHEMISTRY

1. PRIMARILY FOR UNDERGRADUATES

11. GENERAL CHEMISTRY. Chiefly inorganic. Systematic study of the elements and their principal compounds, and the fundamental laws and theories of Chemistry. Three lectures, and six hours of laboratory work per week.

Open to Freshmen *three hours*, through the year.

PROFESSOR MERIGOLD AND ASSISTANTS

12. GENERAL CHEMISTRY. This course is arranged to suit the needs of those students who have had no previous chemical training and who have no present intention of pursuing the subject farther. As broad a view as possible of Chemistry is imparted; general theoretical principles are discussed, but much attention is paid to the applications of Chemistry to daily life.

Two lectures or recitations, and three hours of laboratory work per week.

Open to Freshmen *three hours*, through the year.

Omitted in 1922-23. To be offered in 1923-24.

13. QUALITATIVE ANALYSIS. Basic and acid. Chiefly laboratory work, nine hours per week. Occasional lectures and recitations upon the theories involved.

Three hours, through the year.

PROFESSOR WHITE AND ASSISTANTS.

14. QUANTITATIVE ANALYSIS. Chiefly laboratory work, with occasional lectures, recitations, and problems. A carefully selected series of quantitative determinations, designed to give the student as wide a range as possible of typical methods of quantitative manipulation, both gravimetric and volumetric. Six hours of laboratory work, and one lecture per week. Open only to those who take or have taken course 13.

Three hours, through the year.

PROFESSOR MERIGOLD

15. ORGANIC CHEMISTRY. Systematic study of the compounds of carbon and their applications to the arts. Three lectures per week. Open to all who have taken course 11 or its equivalent.

Three hours, through the year.

PROFESSOR WHITE

16. ADVANCED QUANTITATIVE ANALYSIS (including Gas Analysis). Open only to students who have taken course 14. This course is primarily intended for those who expect to specialize in Chemistry, and may also be taken with advantage by those who intend to study Medicine. The laboratory work will be varied, if desired, to meet the needs of individual students. Occasional lectures treat the subject systematically from both practical and theoretical standpoints. Laboratory work, nine hours per week.

Three hours, through the year.

PROFESSOR MERIGOLD

18. PHYSICAL CHEMISTRY. Two lectures and three hours of laboratory a week, introducing the student to the principal chapters of modern chemical theory. To be admitted to this course, students must have passed Chemistry 11 and 14 and

Physics 11. A knowledge of organic chemistry and calculus is desirable.

Three hours, through the year.

PROFESSOR MERIGOLD

19. BIOLOGICAL CHEMISTRY. This course is a modification of course 110, arranged for those students desiring some knowledge of the chemistry of foods, and for those intending to study Biology or Medicine. It is mainly laboratory work, consisting of a preliminary study of the general methods of organic chemistry, and further a study of proteins, carbohydrates, and fats, enzyme action, blood and urine analysis, etc. Nine hours of laboratory work a week. Open only to those who are taking or who have completed Chemistry 15. A knowledge of quantitative analysis is also desirable.

Three hours, through the year.

PROFESSOR WHITE AND ASSISTANTS

110. ORGANIC SYNTHESIS AND ANALYSIS. Laboratory work, consisting of the preparation of typical organic compounds, qualitative testing for the ordinary elements and organic groups, the quantitative determination of carbon, hydrogen, nitrogen, and the halogens. Course 110 should be taken, if possible, in connection with course 15. The work of this course requires nine hours of laboratory work per week. It is advisable for the student to take or to have taken course 14.

Three hours, through the year.

PROFESSOR WHITE AND ASSISTANTS

111b. INDUSTRIAL CHEMISTRY. The general, fundamental processes of plant operation will be described, and some of the most important manufacturing processes for the production of chemicals will be discussed in detail. Necessarily, a knowledge of the chemical principles underlying the industrial procedures will be required.

Three hours, second semester.

PROFESSOR WHITE

Omitted in 1922-23.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

212b. HISTORY OF CHEMISTRY. This course is intended to cover the historical development of the science. An attempt is

made to give the student some knowledge of the individuality of the men whose work has resulted in the growth and development of modern Chemistry. Attention will be given also to the relation of Chemistry to other sciences at various periods of development.

Open to graduate students and seniors who take or have taken Chemistry 11 and 15 or equivalent courses.

Three hours, second semester.

PROFESSOR MERIGOLD

213a. ADVANCED ANALYTICAL CHEMISTRY. In this course will be considered special features of Analytical Chemistry, both practical and theoretical. The work will include such topics as special analytical methods with particular reference to sources of error, limits of accuracy, and theoretical considerations; preparation of pure inorganic materials and methods of exact analysis required in atomic work and fields of research necessitating precise analysis. Particular attention is paid to results of recent investigation in this field. Open only to students who take, or have taken, courses 16 and 18, or their equivalent.

Three hours, first semester.

PROFESSOR MERIGOLD

3. PRIMARILY FOR GRADUATE STUDENTS

31. THEORETICAL CHEMISTRY. The fundamental principles underlying the transformations of matter are developed and applied to systems of one component. The relations among the various coefficients are derived, and applications are made to real systems. The characteristic functions of Gibbs are introduced and illustrated, and the laws governing equilibria are derived from general principles. The conditions for equilibrium in systems under the action of external forces are derived and applied to various cases.

Lectures *twice a week*, conferences *once a week*, through the year.

PROFESSOR KRAUS

32. THEORETICAL CHEMISTRY. A continuation of the preceding course, in which systems of more than two components are treated. The conditions for equilibrium are derived. The phase rule is derived, and its application to certain particular cases is discussed. The general equations for the energy and entropy of a mixture are derived. Applications are made to dilute

solutions as well as to particular cases of concentrated solutions. The conditions for equilibrium are derived for systems in which reactions take place among various constituents present. The equilibria in the case of gaseous reactions, both homogeneous and heterogeneous, are treated, and the Nernst Heat Theorem is developed and discussed. Lectures and conferences.

Twice a week, through the year.

PROFESSOR KRAUS

33. ADVANCED INORGANIC CHEMISTRY. Instead of treating the subject from the standpoint of the relation of elementary substances in the periodic table, various substances are classified according to their properties. There are thus considered: 1, elementary substances; 2, metallic substances, including elements and compounds; 3, salts, including electrolytes generally; 4, non-saltlike substances, including a brief description of the properties of carbon compounds. This is followed by a study of various typical reactions, such as oxidation and reduction reactions, reactions at high temperatures, and reactions in non-aqueous solutions. This course is intended to extend over a period of from two to three years. Lectures and conferences.

Three times a week, through the year.

PROFESSOR KRAUS

34. THE PHASE RULE. One component and the simpler two component systems are treated during the first year, and three component and the more complex two component systems are treated in the second year. The subject is treated as exhaustively as time permits. *Roozeboom* serves as a general text and is supplemented so far as possible by references to the original literature. Seminar extending over a period of two years.

Once a week.

PROFESSOR KRAUS

Omitted in 1922-23.

35. THE PROPERTIES OF ELECTRICALLY CONDUCTING SYSTEMS. The properties of electrical conductors are discussed, including electrolytic solutions, fused salts, and the metals. References are made to the original literature. Lectures and conferences.

Twice a week, through the year.

PROFESSOR KRAUS

36. THE STRUCTURE OF MATTER. This course is intended to correlate our knowledge of the structure of matter from a kinetic-molecular point of view. This includes a consideration of the

structure of crystalline substances, as derived from X-ray analysis. The nature of various chemical compounds is considered. The theories of Werner, Abegg, and the more recent theories of Thomson and others are discussed. Radioactive phenomena are then briefly considered, followed by a discussion of atomic structure and the relation between the various elements from a structural point of view. Lectures and conferences.

Twice a week, through the year.

PROFESSOR KRAUS

Omitted in 1922-23.

38. EQUILIBRIA IN MIXTURES OF ELECTROLYTES. The properties of mixtures of electrolytes are discussed, and the reactions in such mixtures are considered. These include, among others, hydrolytic reactions, as well as other ionic reactions, in which new new phases may or may not appear. Lectures and conferences.

Once a week, one half year.

PROFESSOR KRAUS

Omitted in 1922-23.

39. THE PROPERTIES OF DISPERSED SYSTEMS. The properties of dispersed systems are discussed with frequent references to the literature. Lectures.

Once a week, one half year.

PROFESSOR KRAUS

Omitted in 1922-23.

310. THE TIME FACTOR IN CHEMICAL REACTIONS. The laws governing the rate of chemical reactions are developed, and the various factors governing the rate of reaction are considered. The effect of catalysts on the rate of reaction is considered, and the various hypotheses proposed for the action of catalytic agents are discussed. Lectures and conferences.

Once a week, through the year

PROFESSOR KRAUS

A study is made of the properties of solutions in liquid ammonia.

Omitted in 1922-23.

This includes solutions of electrolytes, non-electrolytes, and the metals in ammonia, together with a study of the more important reactions taking place in liquid ammonia. Lectures and conferences.

Once a week, through the year.

PROFESSOR KRAUS

312. ADVANCED ORGANIC CHEMISTRY. Conferences are held at which the fundamental conceptions and problems of organic

chemistry are dealt with in a systematic manner. Current literature, applicable to the subjects under discussion, is reviewed.

Twice a week, through the year. PROFESSOR WHITE

314. RESEARCH CONFERENCE. By the staff of the Department of Chemistry. The work in progress in the laboratory is discussed in detail. Reports are expected to be made by all students engaged in research at least twice a year, and perhaps oftener.

Once a week, through the year.

DEPARTMENT OF EDUCATION AND SCHOOL HYGIENE

PROFESSOR BURNHAM, PROFESSOR SANFORD

The work of this department is in the closest connection with that in the Department of Psychology and largely based upon it. The aim is to give all students, both undergraduates and graduates, the opportunity for an introduction to the subject of Education as a universal culture interest; and prevision for the significant aspects of Education in the school and the community. Among those who plan to become teachers it aims also to develop professional interests and to give knowledge of sound principles and methods and of the best educational literature, as a preparation for practical school work.

GRADUATE WORK

To graduate students the department gives the opportunity for research in the problems of genetic pedagogy, child hygiene, mental hygiene, and the large problems of education in relation to industry and society. The department offers courses leading to the degrees of Master of Arts and Doctor of Philosophy.

The work in this department is intended to meet the needs of the following classes of students:

First. Those intending to teach some other specialty but who wish a general survey of the history, present state, methods, and recent advances in the field of university, professional, and technical education.

Second. Those who desire to become professors of Pedagogy, heads or instructors in normal schools, superintendents, medical

inspectors, or otherwise to become experts in the work of education.

Third. Those who wish to become students of the great problems of education and hygiene in relation to industrial and social development.

Courses in Psychology are open to properly qualified students in this department, and it is expected that those who have not had extended training in Psychology will take suitable courses in this subject.

THE DEPARTMENTAL LIBRARY

The library of the department has a large collection of educational literature, being especially rich in German and French literature and having a large number of official reports from various countries.

Many of the more common educational books are accessible in the Worcester Public Library and have not been duplicated by the University. The large collection of text-books in the library of the American Antiquarian Society and its valuable historical material are also accessible to the University students.

The collection of educational periodicals includes a large number of the best foreign journals—English, French, German, etc.

THE EDUCATIONAL MUSEUM

The nucleus of an Educational Museum has been formed. This contains a valuable collection of educational apparatus, pictures, illustrative material for language and *Anschauungsunterricht*, kindergarten material, maps, charts, diagrams, text-books, lantern slides, photographs, and illustrative material of various kinds in School Hygiene, History, Arithmetic, Language, the Natural Sciences; apparatus for the teaching of Arithmetic, abacuses of various kinds, charts for counting, reckoning machines, number tablets, weights, measures geometrical models; toys from different countries, a number illustrating scientific principles in Physics, and the like. The collection includes charts illustrating good and bad posture, apparatus for insuring cleanliness, for testing the air, charts illustrating the incidence of school diseases, the effects of antitoxins, etc., and a sample

collection of the antitoxins for the various diseases, samples of the latest hygienic seats and desks made under the direction of the Posture League; and the set of over fifty charts on School Health in the United States prepared by the Committee on School Health of the National Council of Education and the American Medical Association.

This museum is located on the top floor of the Main building.

COURSES IN EDUCATION AND SCHOOL HYGIENE

1. PRIMARILY FOR UNDERGRADUATES

No courses announced. See 28 below.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

23. PRINCIPLES OF EDUCATION. This course treats certain fundamental educational principles and involves an historical study of several important chapters in Education. Such topics as the following will be included. Educational ideals. The interrelation of educational aims. The dominant aim at different stages of development. The correlation of educational forces. The family and education. The church and education. State aid and control. The scientific method in education. Antithetic educational principles. The history of nature vs. convention in education. Individualism vs. collectivism. The manifestation and influence of these educational ideals as illustrated in England, France, and Germany before the war and tested by the war. The present opportunity in education and the problems of educational reform and reconstruction. This course is primarily for graduates but with the consent of the instructor may be taken by undergraduates who have had a sufficient preparation in Psychology. One lecture per week.

One hour (or two hours, with prescribed reading), through the year. Writted in 1922-23. PROFESSOR BURNHAM

28. THE TEACHING PROFESSION. Teaching as trade or learned profession. The evolution of the teacher's calling. The teaching body as a social group in relation to other economic and social groups. The social function of the teacher. Characteristics of the teaching body as a social group. The teacher and the parent. The teacher and the artisan. The teacher in the

countries of antiquity, in China, India, Greece, Rome, etc. The medieval teacher. The teachers of the early Renaissance. The great schoolmasters of the Reformation. The reformers, Comenius, F. A. Wolfe, Pestalozzi, et al. The teaching profession in Germany. Fundamental principles concerning the training of teachers. The normal schools. The hygiene of teaching.

One hour (or two, with prescribed reading), through the year. Open to qualified undergraduates.

PROFESSOR BURNHAM

Not to be offered in 1923-24.

See also Psychology 201, EDUCATIONAL PSYCHOLOGY, page 116.

3. PRIMARILY FOR GRADUATE STUDENTS

34. HIGHER EDUCATION IN THE UNITED STATES. After an historical survey of the influences which have molded higher education in this country, the demands of the present day upon institutions of higher learning will be analyzed and methods of meeting them considered. Especial attention will be given to the distinguishing characteristics of college and university students and the needs peculiar to their stages of development.

One lecture and one conference period per week, through the year.

Not to be offered in 1922-23.

PROFESSOR SANFORD

36. HYGIENE OF THE SCHOOL CHILD. This course has been given in alternate years with the course on the Hygiene of Instruction. Some of the more important chapters in modern school hygiene will be considered, including such topics as: The conditions that determine growth and development, physiological age, the physical and mental differences between children and adults, the general principles of somatic and mental hygiene, the hygiene of the senses, modern studies of defects of sight and hearing, school diseases, the hygiene of the voice, the mouth, the teeth, the nose. Tests of ability to work and of physical condition. Medical inspection. The development of habits of healthful mental activity. The hygienic aspects of recent psychological studies.

Lectures one hour per week, through the year.

Cancelled in 1922-23

PROFESSOR BURNHAM

37. THE HYGIENE OF INSTRUCTION AND THE PRINCIPLES OF MENTAL HYGIENE. The topics considered include: The significance of stimulation in the development of the nervous system, the development of associated stimuli and conditioned reflexes. The conditions of efficient brain activity. The general principles of mental hygiene. The effects of drug stimuli, alcohol, tobacco, caffeine, and the like. Fatigue. The period of study. Recesses. The optimum conditions of school work. The hygienic aspects of examinations, discipline, and punishment. The relations of discipline to mental hygiene. The hygiene of different subjects of school instruction.

One hour per week, through the year. PROFESSOR BURNHAM
Not to be offered in 1923-24.

39. SEMINAR. The work is determined largely by the needs of the students who take this course. It is expected that each member of the seminar will select some subject for special investigation, either in the field of Education or School Hygiene. A coöperative method is used so that each student may profit by the work of all of the others.

One and a half or two hours per week, through the year.

PROFESSOR BURNHAM

DEPARTMENT OF ENGLISH

PROFESSOR AMES, PROFESSOR DODD

Prescribed work in English consists of English 11, required of all Freshmen, and six semester hours in English Literature, required of all students, to be completed by the end of the Junior year. English 111 is elective for all Freshmen, and English 13 and 18 for Freshmen who expect to make English their *major*. All courses except English 11 are elective for both Juniors and Seniors. A *major* in English consists of twenty-four semester hours, including English 11; a *minor* of eighteen semester hours, including English 11.

COURSES IN ENGLISH

1. PRIMARILY FOR UNDERGRADUATES

11. ENGLISH COMPOSITION. The course aims through con-

stant practice in composition and the reading of literature to give the student greater facility in written expression.

Required of Freshmen.

Three hours, through the year.

PROFESSOR DODD

13a. THE DRAMA. This is primarily a course in Shakespeare. Seven of Shakespeare's plays are studied, and dramatic readings of selected scenes are given by the students in the classroom. For collateral reading, which is required throughout the semester, the student may elect further reading in Shakespeare or a brief course in the most important of the modern dramatists.

Three hours, first semester.

PROFESSOR AMES

14. THE NOVEL. A reading course beginning with the novel in the time of Shakespeare and ending with that of our own day.

Three hours, through the year.

PROFESSOR DODD

Omitted in 1922-23.

16a. ENGLISH COMPOSITION. A second-year course in writing, for students who have completed English 11. The first half of the course is devoted chiefly to practice in exposition. Various forms of expository writing are studied, and weekly or fortnightly themes required. The latter half of the course the student may adapt to his aptitudes and needs by electing for special practice exposition, argumentation, or narrative.

Three hours, first semester.

PROFESSOR AMES

17a. DRAMATIC EXPRESSION. A course designed to aid the student in developing powers of dramatic expression.

Three hours, first semester.

PROFESSOR DODD

Given Omitted in 1922-23.

18b. THE BIBLE. This course aims to stimulate an intelligent appreciation of the Bible as literature. It consists of an interpretation chiefly of the Old Testament, its history and epic, poetry and oratory, philosophy and prophecy.

Three hours, second semester.

PROFESSOR AMES

Omitted in 1922-23.

120a. BIOGRAPHY AND LETTERS. A study of the biography autobiography, and correspondence of distinguished authors and artists from the eighteenth century to the present day.

Three hours, first semester.

PROFESSOR DODD

121a. Biography & Letters since 1900.

Three hours, 1st Sem.

Prof Dodd.

19. ENGLISH LITERATURE FROM THE REIGN OF QUEEN ANNE TO THE ACCESSION OF QUEEN VICTORIA. A general survey of the period between 1700 and 1830, with readings from Addison, Steele, Defoe, Swift, Pope, Fielding, Sterne, Johnson, Boswell, Goldsmith, Burke, Burns, Wordsworth, Coleridge, Byron, Keats, Shelley, Scott. Collateral readings in minor writers.

Three hours, through the year.

PROFESSOR AMES

Omitted in 1922-23.

110b. NINETEENTH CENTURY POETRY. A brief study of the works of Tennyson and Browning, with collateral reading in other poets of the nineteenth century and in the more notable poets of the present.

Three hours, second semester.

PROFESSOR AMES

111. AMERICAN LITERATURE. This course is designed to afford a comprehensive survey of American Literature. Most of the year is devoted to an interpretation of the prose and poetry of the nineteenth century. Besides definite prescriptions of reading, additional collateral reading is required throughout the course. In the latter the student may choose from a wide variety of essays, fiction, poetry, and biography, including the best work of the writers of today. The course may be elected for the year or for the first semester only.

Open to Freshmen.

Three hours, through the year.

PROFESSOR AMES

112. NINETEENTH CENTURY ESSAYS. This course, while aiming to acquaint the student with the modern masters of prose, is intended primarily as an introduction to those movements of modern thought that achieve expression in the prose literature of the nineteenth century. Among the essayists read are Lamb, De Quincey, Macaulay, Carlyle, Emerson, Thoreau, Mill, Ruskin, Morris, Arnold, Newman, Pater, Huxley, Tyndall, John Fiske. Opportunity is given for appropriate collateral reading in fiction and poetry, and in essayists of the present day. The course may be elected for the year or for the first semester only.

Three hours, through the year.

PROFESSOR AMES

113b. MODERN DRAMA IN ENGLISH. A study of contemporary English—writing and foreign dramatists.

Three hours, second semester.

PROFESSOR DODD

11b. FINE ARTS. A general course in the appreciation of the arts; painting, sculpture and architecture.

Three hours, second semester.

PROFESSOR DODD

DEPARTMENT OF GEOGRAPHY

A complete statement of the aims and the scope of the courses in Geography and the related subjects, Physiography, Meteorology, and Climatology, will be found in the announcement of the Graduate School of Geography, on Pages 47-55.

DEPARTMENT OF GEOLOGY

PROFESSOR LITTLE

1. PRIMARILY FOR UNDERGRADUATES

12. GENERAL GEOLOGY. First semester. A study of the rocks which compose the earth's crust, the physical processes which act on the surface of the earth and an interpretation of the land forms which result from this modification. The structure of the earth is also studied and the practical applications indicated.

Second semester. The geological history of the earth including the geography of the past and the evolution of life as recorded by fossil remains. Indivisible course.

Two recitations and laboratory period weekly. Occasional field trips.

Three hours, through the year.

PROFESSOR LITTLE

122. ECONOMIC GEOLOGY. About one half of the first semester will be occupied with an elementary study of crystallography and mineralogy. The remainder of the year will be spent in a study of the origin of the deposits of useful minerals and a discussion of the world's more important occurrences. Special attention will be given to the distribution and control among the various countries of nonmetallic substances such as coal, petroleum, and phosphates; and metallic substances such as iron, copper, and gold. Elementary chemistry and geology desirable.

Lecture or recitation 8 Wed. and Fri.

Laboratory Mon. 8, and two further hours at individual convenience, but Fri. afternoon must be kept open for field trips and to replace Monday morning when the entire class is wished together for more than an hour.

Two class meetings and one laboratory period weekly. Indivisible course.

Not given in 1922-23.

Three hours, through the year.

PROFESSOR LITTLE

DEPARTMENT OF GERMAN

PROFESSOR RANDOLPH

German 12, or French 12, or the equivalent of one of these (see the statement of general requirement in foreign language, page 35), is required of all students who entered the College earlier than September 1921.

Courses 11, 12, and 16 are offered for 1923-24.

COURSES IN GERMAN

1. PRIMARILY FOR UNDERGRADUATES

11. ELEMENTARY GERMAN. Drill in pronunciation and grammar; composition; reading of easy prose.

Open to Freshmen.

Three hours, through the year.

PROFESSOR RANDOLPH

12. SECOND YEAR GERMAN. Review of grammar, with composition; the reading of several easy pieces of modern prose. The course is a continuation of German 11.

Open to Freshmen.

Three hours, through the year.

PROFESSOR RANDOLPH

15. READINGS FROM GERMAN CLASSICS. Lessing, *Minna von Barnhelm*, *Emilia Galotti*; Schiller, *Maria Stuart*, *Wilhelm Tell*; Goethe, *Hermann und Dorothea*, *Egmont*, *Iphigenia*; the shorter poems of Schiller and Goethe. The principal critical writings of Lessing, Herder, Goethe, and Schiller are discussed by the instructor. Attention is also paid to the development of dramatic form.

Three hours, through the year.

Omitted in 1922-23.

16. SCIENTIFIC GERMAN. Lassar-Cohn, *Die Chemie im täglichen Leben*; Greenfield, *Technical and Scientific German*. The course is designed especially for men *majoring* in science,

but the subject matter includes much of interest to the casual student. Prerequisite, the first semester of German 12 or its equivalent.

Open to Freshmen.

Three hours, through the year.

PROFESSOR RANDOLPH

18. ADVANCED READING AND CONVERSATION. The course takes up through the medium of suitable German texts a variety of topics designed to acquaint the student with essential facts about Germany and the German people. About a third of each recitation hour is devoted to conversation in German. Open to students who have had at least three years of work in the language.

Three hours, through the year.

Omitted in 192~~1~~²₃

DEPARTMENT OF HISTORY AND INTERNATIONAL RELATIONS

PROFESSOR BLAKESLEE, PROFESSOR BARNES, PROFESSOR BRACKETT
PROFESSOR MARTIN, PROFESSOR DENNIS

UNDERGRADUATE WORK

The aim of the department in its undergraduate work is to give in its several courses a broad knowledge of the more significant aspects of the growth of the leading countries of the world. This includes the study not only of the important facts, but more especially of the processes of development in government, diplomacy, society, business, religion, science, and education. The courses are not limited to a consideration of Europe and the United States, but include the progress and present-day conditions of the leading countries of South America, Asia, and Africa. While the work is designed primarily to give a cultural knowledge of general world affairs, many of the courses are of especial value to those who are preparing to teach, or to enter the field of law, theology, social service, or government.

Course 11, primarily for freshmen, is open to both juniors and seniors; courses 13, 16, 19 are elective for all; courses 14 and 15 are designed for juniors and seniors.

Related courses in Government, Economics and Sociology are listed on Pages 112-114.

GRADUATE WORK

The distinctive feature of the graduate work is the emphasis it places upon the various aspects of International Relations and of Social and Intellectual History. Without neglecting scholarly investigation in the economic, political, and social life of preceding centuries, it seeks to know the past primarily in order to understand the present; to learn from a study of their historical evolution how the various nations and races have developed the characteristics and culture which mark them today; to gain a sympathetic appreciation of the best in other civilizations; and to evaluate correctly the problems and the difficulties constantly arising in the international relations and diplomacy of the family of states. The field includes not only the United States and the nations of Europe, but also the newer and rapidly developing states of Asia, Latin America, and Africa. Political development is regarded as of no greater importance than diplomatic, intellectual, economic, and social progress.

INTERNATIONAL RELATIONS

In carrying out these features of its work, the department has arranged occasional conferences for the discussion of the international relations of various lands. In 1909 the sessions dealt with the Far East, including China, India, the Phillippines, and Hawaii; in 1910, the Near East and Africa; in 1911, Japan and Japanese-American relations; in 1912, Recent Developments in China; in 1913, Latin America; in 1915, the Problems and Lessons of the World War; and in 1920, Mexico and the Caribbean. Altogether nearly two hundred men have taken part in these conferences—university professors, anthropologists, government officials, officers of the army and navy, travelers, missionaries, and representatives of the countries under discussion—all of whom could speak with authority. The University students are enabled not merely to read the addresses and papers, which are issued in a series of bound volumes, but to listen to and meet these men who are both writing and making present-day history.

HISTORY OF THOUGHT AND CULTURE

In addition to special attention to international relations, the department aims particularly to emphasize the more progressive tendencies in historical studies. Ample provision is made for work in social and intellectual history. By combination with related courses in other departments the students will be able to secure adequate instruction in the history of education and in the history of science and technology, a field now being cultivated by progressive scientists and historians alike. Several courses in sociology are of special significance for students of social history in providing them with the facts of social evolution and the technique of sociological investigation.

FELLOWSHIPS IN HISTORY AND INTERNATIONAL RELATIONS

A Fellowship in American History, known as the American Antiquarian Society Fellowship, has been established by members of the American Antiquarian Society. It has a value of four hundred dollars in addition to remission of tuition fees.

The subject of research chosen by the Fellow for his Doctor's thesis should be selected within the field of American History before 1880, the period in which the Library of the American Antiquarian Society is of greatest assistance to historical investigators. In addition to the society's valuable manuscripts of the Colonial period, it has an unequalled collection of books printed in America in the early period and of American newspapers from 1660 to 1860.

Regular University Fellowships and Scholarships are also available for students in this department.

THE DOCTORATE

The various courses offered in the department are so arranged, in cycles of two or three years, that students working for their doctorate will be enabled to secure a full program each year. Those taking History as a major are advised to elect their *minor* either in Geography or in Sociology. In addition to the regular courses, a feature of the method of instruction in the department is the frequent informal conferences between instructor and student.

GENERAL COURSES IN HISTORY

1. PRIMARILY FOR UNDERGRADUATES

11. **MEDIEVAL HISTORY.** The period covered is from the fall of Rome to the French Revolution. The course serves as a general introduction to further historical study. The aim is to give a clear and accurate picture of the life and of the great movements of the medieval and early modern period. Political details and the memorizing of names and dates are avoided so far as is practicable, and stress laid upon social conditions, country and city life, the rise of commerce and industry, intellectual and religious development, and general medieval culture. Some of the leading topics are the Germanic invasions, feudalism, the rise of the papacy, the rise of modern nations, the crusades, and the Renaissance and Reformation. One of the objects of the course is to introduce the student to as large a number as possible of the standard writers upon the period, and to induce him to come to independent conclusions upon disputed questions. The text-book is supplemented by lectures and extended collateral readings.

Open to freshmen.

Three hours, through the year.

PROFESSOR BLAKESLEE

14. **THE DEVELOPMENT OF AMERICAN SOCIETY.** This course endeavors to present the history of the United States from the standpoint of the newer tendencies in historical interpretation. The outline for the course is provided in Max Farrand's *Development of the United States* and Schlesinger's *New View-points in American History*. Open to juniors and seniors.

Three hours, through the year.

PROFESSOR BARNES

15. **ENGLISH HISTORY.** A survey of English History. Particular emphasis is laid upon the general developments and tendencies. Lectures, discussions, and reports. Open to juniors and seniors.

Three hours, through the year.

Omitted in 1922-23.

16. THE POLITICAL HISTORY OF MODERN EUROPE. This course continues History 11. The main emphasis is laid upon the following topics: The development of the national monarchies; the growth of the middle class, the English and French revolutions; restoration, reaction, and the system of Metternich; the development of constitutional government and the growth of political democracy; the completion of the national state system; the growth of national imperialism; and the political aspects of the World War and reconstruction. Text-book, readings, and lectures.

Three hours, through the year.

Omitted in 1922-23.

19. HISTORY OF GREECE AND ROME. The first semester is devoted to the history of Greece, the second to the history of Rome. The course aims to place the principal emphasis upon the characteristic elements of these civilizations and the contributions which they made to modern civilization. The course is conducted by the use of a text-book, by assigned readings, lectures and discussions.

Open to freshmen.

Three hours, through the year.

PROFESSOR BRACKETT

COURSES IN INTERNATIONAL RELATIONS

1. PRIMARILY FOR UNDERGRADUATES

13. INTERNATIONAL RELATIONS. The group of countries taken for especial study has varied from year to year. The course consists mainly of lectures, but students are expected to read extensively in assigned works, and to prepare two class theses. Open to all undergraduates.

Three hours, through the year.

PROFESSOR BLAKESLEE

Omitted in 1922-23.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

21. THE HISTORY OF AMERICAN DIPLOMACY. A general course treating of the international relations of the United States from its beginning as an independent nation to the present day. It traces the gradual development of American foreign policy,

points out its distinctive features, and shows how it has differed from the diplomacy of other countries. A familiarity with the standard books in the field is expected, and frequent reference made to such source material as Moore's *Digest* and *Arbitrations* and the *Foreign Relations of the United States*.

Three hours, through the year.

PROFESSOR BLAKESLEE

Omitted in 1922-23.

23. THE RECENT HISTORY OF THE BRITISH EMPIRE. An analysis of the British Imperial Possessions, emphasizing the developments and problems of the last quarter of a century.

Three hours, second semester.

ACTING PROFESSOR DENNIS

24. THE EXPANSION OF EUROPE. This course aims to indicate the importance of the contact of European culture and institutions with those of the world at large for the development of European civilization in modern times. Designed to furnish a general introduction to a more intensive study of modern imperialism and international relations. Lectures, and assigned readings, based on Abbott's *Expansion of Europe*, Keller's *Colonization*, Muir's *Expansion of Europe*, and the more detailed treatises dealing with special areas and topics.

Two hours, through the year.

PROFESSORS BLAKESLEE AND BARNES

Omitted in 1922-23.

25. INTERNATIONAL LAW. A general course adapted for graduate students who will do a large amount of independent reading. While the course aims to give a knowledge of the general principles of international law, it presents the subject with especial reference to the events and the outcome of the recent war, and discusses the problem of modifying the present rules of international law to meet the changed world conditions. Considerable attention is also given to unsettled legal questions other than those of the war, such as those now pending between this country and Mexico. The lectures are supplemented by discussions and by a study of the leading text writers and of cases, especially those of historic importance. The students are expected to read widely, not only in cases collected by Scott, Evans, and Stowell and Munro, but in Moore's *Digest* and *Arbitrations*.

Three hours, through the year.

PROFESSOR BLAKESLEE

26. ^a THE NEW EUROPE. A course on the post-war political geography of Europe: the new boundaries, the plebiscites and the new governments. Adequate attention is given to physical geography, climate, races, religions, history, resources and commerce.

Three hours, first semester.

ACTING PROFESSOR MARTIN

27. LATIN AMERICA. A course for graduate students and advanced undergraduates, who are expected to read widely and do a large amount of independent work. A survey of the history of the various Latin American countries is followed by a consideration of international diplomacy, political problems, systems of government, race questions, economic and industrial conditions. Emphasis is placed upon the relations, both in trade and diplomacy, between the United States and the countries of Latin America. Present problems are stressed: The Monroe Doctrine; Pan-Americanism; the Panama Canal; the treaty with Colombia; the Mexican issue; the American administration of Haiti, Santo Domingo, and the Virgin Islands; the effect of the World War upon the various Latin American republics, and their present attitude towards world organizations and the League of Nations.

Three hours, through the year.

PROFESSOR BLAKESLEE

Omitted in 1922-23.

3. PRIMARILY FOR GRADUATE STUDENTS

32. RECENT INTERNATIONAL RELATIONS OF THE UNITED STATES. A specialized course presenting a survey of recent events and tendencies in the foreign relations of the United States. The reversal of attitude towards other important powers, from the Civil War to the opening of the World War, will be explained: The strong friendliness for Germany changing to dislike and fear by 1913; the hostile feeling towards France gradually turning to the former traditional sympathy; the open antagonism towards Great Britain becoming a warm friendship during the Spanish War; and the paternal fondness for Japan being replaced by the growing suspicion developed since the Russo-Japanese War. Other topics will include: The expansion of the sovereignty and power of the United States both in the

Caribbean and the Pacific Ocean; the increasing participation of the United States in the international politics of the Far East, and its growingly important part in world affairs since the Spanish War. The latter part of the course will deal with the diplomatic history of the United States during and since the World War.

Two hours, through the year.

PROFESSOR BLAKESLEE

33. THE EXPANSION AND THE COLONIAL POLICY OF THE UNITED STATES. The history of the successive territorial acquisitions of the United States is traced, including the diplomatic negotiations and the relations with foreign powers. This is followed by a study of the constitutional questions involved, especially those regarding the status of newly acquired possessions and of present-day dependencies; the difference between incorporated and unincorporated territory; and the rights and privileges of inhabitants and citizens of the various lands considered. The aims and the continuity of the American colonial policy are pointed out; and the governmental systems described for the Philippines, Hawaii, Porto Rico, Alaska, Guam, Tutuila, and the Virgin Islands.

One hour, through the year.

PROFESSOR BLAKESLEE

Omitted in 1922-23.

34. THE FAR EAST. A study of the international situation in the Far East. The topics include: China—political and economic conditions; Japan—recent industrialization and growth of political liberalism; Korea—Japanese administration and the recent revolution; and the Washington conference and its results.

Omitted in 1922-23.

Two hours, through the year.

PROFESSOR BLAKESLEE

35. THE INTERNATIONAL RELATIONS OF THE PACIFIC. The course deals with the islands of the Pacific Ocean, especially those formerly in the possession of Germany, and emphasizes the interests of the United States. Among the topics presented are: The early period of sandalwood, beachcomber, and whaleships; American trade, exploration, and missionary activity; the general indifference of Europe to colonies during the first three quarters of the nineteenth century; the gradual rise of the colonial spirit;

rivalry between Germany and the Australian commowealths; the "scramble" for the Pacific in 1884; Germany's colonial empire; the characteristics of Germany's colonial administration; Pacific island possessions of the United States; Japan's colonial aims and policy; naval bases and strategic centers; economic and commercial values; the World War in the Pacific; the settlement at the Paris Conference; mandatories, their administration, and the claims of the United States; and the Washington Conference.

One hour, through the year.

PROFESSOR BLAKESLEE

310 FOREIGN POLICIES OF SOVIET RUSSIA. An intensive study of the policies and achievements of the Bolshevik regime with respect to expansion and diplomatic relations.

Two hours, ⁵second semester.

ACTING PROFESSOR DENNIS

36. SEMINAR. The students in the Department of History and International Relations meet one evening a week for the consideration of particular topics in international relations and for the review of book and magazine material of especial value. Each member is expected to present reports which then form the basis for general discussion.

In studying these problems arising out of the war the Seminar is fortunate in having at hand the excellent war collection of the University Library, one of the largest in the country, which already numbers between seven and eight thousand volumes.

PROFESSORS BLAKESLEE, BARNES, MARTIN AND DENNIS
W 4.45 - 10

RELATED COURSES IN OTHER DEPARTMENTS

See announcements of Department of Geography and Department of Political and Social Science.

COURSES IN THE HISTORY OF THOUGHT AND CULTURE

1. PRIMARILY FOR UNDERGRADUATES

No courses announced.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

215. THE ORIGINS OF EUROPEAN CIVILIZATION. A general survey of the evolution of European society and material culture to 1500 A. D. Text-books, readings, and lectures. This and

the following course are based upon the outline provided in Barnes' *Social History of the Western World*. Open to qualified seniors and to graduates under special requirements. Juniors may register only with permission of the Collegiate Board.

Three hours, through the year

PROFESSOR BARNES

Omitted in 1922-23. To be offered in 1923-24.

216. THE SOCIAL HISTORY OF THE MODERN WORLD. This course continues History 215. It traces the development of European society since 1500. The discussion centers about: The expansion of Europe through the Crusades, geographical discoveries, and colonization; the commercial revolution, the development of capital, and the rise of the middle class; the resulting industrial commercial, social, and political changes; the industrial revolution viewed as the rise of applied science and machine technology, the growth of the factory system, and the transformation of modern society; and the various programs of social reform proposed to solve the problems of modern industrial society. Text-books, readings, and lectures. Open to qualified seniors and to graduates under special requirements. Juniors may register only with permission of the Collegiate Board.

Two ~~Three~~ hours, through the year 1924-25.

PROFESSOR BARNES

217. THE HISTORY OF THE INTELLECTUAL CLASS IN EUROPE. This course traces the changes in interests, opinions, and attitudes of mind on the parts of the intellectual classes from Oriental antiquity to the present day. Designed as a general culture course and as the proper background for the technical and specialized courses dealing with the history of science, philosophy and education. Lectures, based on Robinson's *Outline of History of the Western European Mind*, and assigned readings. Open to graduate students and to especially qualified seniors. Juniors may register only with permission of the Collegiate Board.

Two ~~Three~~ hours, through the year 1924-25.

PROFESSOR BARNES

218. THE HISTORY OF CLASSICAL SCHOLARSHIP. This course deals with the nature, development, and historical influence of Hellenic scholarship. The course will aim primarily to emphasize the contributions which the Greeks have made to the history of thought and culture, and to indicate the channels.

through which the Hellenic influences have been transmitted to the modern world. Lectures, assigned readings and papers.

Three hours, through the year.

PROFESSOR BRACKETT

Omitted in 1922-23.

3. PRIMARILY FOR GRADUATE STUDENTS

37. HISTORIOGRAPHY. A study of the methodology and literature of history as an introduction to historical research and as a preparation for the teaching of history. After a few introductory lectures on the scope, aims, methods, and interpretations of history the course attempts to arrive at a critical knowledge of the status of contemporary historiography by studying the stages and processes through which it has been attained. Lectures and readings in Bernheim, Langlois and Seignobos, Wolf, Shotwell, Bury, Peter, Gairdner, Balzani, Masson, Wegele, Fueter, Gooch, Jameson, Bassett, and in the chief works of some of the leading historians from Herodotus to the present. Lectures, readings and reports.

One hour, through the year.

PROFESSOR BARNES

Omitted in 1922-23.

38. THE HISTORY OF THE SOCIAL SCIENCES. This course surveys the evolution of the sciences of politics, economics, and sociology in relation to the social and intellectual environment in which they have developed. Particular attention will be given to the development of methodology, to the process of differentiation from the parent body of social and ethical philosophy, and to the special influences affecting the progress of the social sciences as distinguished from natural science. Lectures and readings.

One hour, through the year.

PROFESSOR BARNES

Omitted in 1922-23.

39. THE DEVELOPMENT OF THE DOCTRINE OF THE RELATION OF GEOGRAPHY TO HISTORY. The course traces the succession of theories regarding the effect of geographical environment upon social processes and the historical development of nations. It incidentally deals with the intellectual and scientific progress which is reflected in the assumptions and the data which have

formed the foundation of such doctrines. Lectures and assigned readings.

One hour per week, through the year. PROFESSOR BARNES
Omitted in 1922-23.

311. RESEARCH COURSE IN INTELLECTUAL HISTORY. An advanced research course open to students who have successfully completed course 217. Special phases of intellectual development are studied from year to year. For 1922-23 the subject is Paganism, Christianity, and the decline of ancient science. The method of procedure is by reports and discussions.

Two hours, through the year. 8-10 A.M. PROFESSOR BARNES

312. THE HISTORICAL AND CULTURAL ASPECTS OF MODERN NATIONALISM. This course aims to study the modern nationalistic and patriotic complex as a problem in the history of thought and culture. The historical, biological, sociological, economic, political, and cultural aspects of nationalism are critically examined. Lectures, readings, and reports.

One hour, through the year. PROFESSOR BARNES
Omitted in 1922-23.

313. RECENT TENDENCIES IN THE TEACHING AND INTERPRETATION OF HISTORY. This course traces the rise of the newer conceptions of the nature and purpose of history, and indicates the relation of these developments to the study and teaching of the subject. Intended primarily for teachers of history.

One hour, through the year. PROFESSOR BARNES
Omitted in 1922-23.

RELATED COURSES IN OTHER DEPARTMENTS

See announcements of the Department of Education and School Hygiene, the Department of Psychology and the Department of Political and Social Science: also courses on the history of the various sciences listed in the announcements of the departments of Biology, Chemistry and Physics.

DEPARTMENT OF MATHEMATICS

PROFESSOR WILLIAMS, PROFESSOR MELVILLE

The undergraduate courses are designed to furnish a practical knowledge of fundamental methods of Mathematics that will be

useful in the affairs of life, in business, and in the pursuit of the sciences—as well as to prepare students for more advanced work in Mathematics.

A *major* in Mathematics consists of twenty-four semester hours, including courses 13 and 14; a *minor* consists of eighteen semester hours, including course 12.

MATERIAL FACILITIES

The Library is provided with the more important text-books, treatises, and memoirs on the various branches of Mathematics, as well as the principal journals and transactions of learned societies that are devoted to any considerable extent to Mathematics.

The Department possesses a good collection of models in addition to an adequate instrumental equipment for the work in applied mathematics.

COURSES IN MATHEMATICS

1. PRIMARILY FOR UNDERGRADUATES

11. INTRODUCTORY COURSE*: For students with *major* or *minor* in Mathematics or Physics. Elements of plane Analytic Geometry, including the straight line; plane Trigonometry; elementary theory of equations including Horner's method and De Moivre's Theorem for complex numbers; elements of determinants; and elements of differential and integral calculus. "Unified" course.

Open to freshmen.

Three hours, through the year.

PROFESSOR WILLIAMS.

*See also course 18.

12. CALCULUS AND ANALYTIC GEOMETRY. Differential and integral calculus and Analytic Geometry applications; areas; Taylor's and Maclaurin's Theorems; series; lengths of curves and curvature.

Three hours, through the year.

PROFESSOR WILLIAMS.

13. CALCULUS AND ANALYTIC GEOMETRY OF THREE DIMENSIONS. Continuation of course 12 with applications to solutions of problems.

Three hours, through the year.

PROFESSOR WILLIAMS.

14. DIFFERENTIAL EQUATIONS.

Three hours, through the year

PROFESSOR MELVILLE

17. SPECIAL ELEMENTARY COURSE. For students deficient in preparatory Mathematics.

Three hours, through the year.

PROFESSOR WILLIAMS

Omitted in 1922-23.

18. ELEMENTARY MATHEMATICS. A course offered primarily for students who do not intend to *major* in Mathematics or Physics but who still desire some mathematical training. The principal topics studied are Algebra, with emphasis on the solution of equations, plane Trigonometry, and coördinate Geometry. The course is designed to meet the needs of students in Physics and Chemistry who do not take Mathematics 11, and of students in other subjects who are interested in graphical methods or statistics.

Open to freshmen.

Three hours, through the year.

PROFESSOR MELVILLE

19a. ASTRONOMY. Chiefly descriptive, the object being to make the students acquainted with the main features of the heavens, celestial phenomena and laws governing them, and the most important theories that have been devised to explain them, with such mathematical deductions as will meet the needs of the class. Telescopic observations under the direction of the instructor.

Open to freshmen.

Three hours, first semester.

PROFESSOR WILLIAMS

Alternates with course 110.

Omitted in 1922-23.

110a. ELEMENTARY SURVEYING. Fundamental principles; field work with transit, level, sextant, compass, and chain; map making and map reading.

Open to freshmen.

Three hours, first semester.

Alternates with course 19. Omitted in 1923-24.

112b. APPLIED MATHEMATICS. A course treating different topics from year to year, and intended to meet in part the needs of groups of students interested in various applications of Mathe-

matics. According to the demand, work will be offered in elementary or advanced theory of statistics, including theory of errors, least squares, measures of correlation, graphical representation, etc.; or in the mathematical theory of investment and insurance; or in Descriptive Geometry and the elementary theory of projections as applied to map making. Open to all properly prepared students.

Three hours, second semester.
Omitted in 1922-23.

PROFESSOR MELVILLE

DEPARTMENT OF PHYSICS

PROFESSOR WEBSTER, PROFESSOR GODDARD, MR. ROOPE

The aim of the undergraduate work of this Department is to give to a student who has had a good high school course the opportunity to obtain that knowledge of the methods and results of modern Physics without which no one may hope to be considered liberally educated, as well as to fit him in the minimum of time with professional preparation for Chemistry, Geology, Meteorology, Geography, Medicine, the teaching of Science, Engineering, or graduate work in Physics.

To the inculcation of the methods of research and the highest ideals in science the graduate work of the department is exclusively directed. Many engineering questions have been treated in this department, and many graduates of engineering schools have resorted hither for further training.

UNDERGRADUATE WORK

Undergraduate students whose *majors* or *minors* are in Physics are required to take, during the freshman year, either Mathematics 11 or 18, and Physics 111 which deals with practical problems in Mechanics, and affords an excellent foundation for the beginning course, Physics 11. The department offers a three hour course, Physics 112, which includes laboratory work, for premedical students or others desiring a course of this nature, the pre-requisite being Mathematics 11 or 18.

A *major* in Physics for undergraduates requires twenty-four semester hours. Students *majoring* in Physics should take Physics 11 the second year, Physics 14 the second semester of the

second year and the first semester of the third year, Physics 16 the second semester of the third year, and one or more of the courses 12, 13, 15, and 17. Students *minoring* in Physics should take Physics 11, and 12, 13, 14, 15, 16, or 17. Students *majoring* in Chemistry should take Physics 11, 14, and 16 for their *minor*.

GRADUATE WORK

In the graduate work the courses are so arranged that a student who has had a good college course may begin in any year, and at the end of three years will have neglected no important subject.

The courses for graduate students in 1923-24 will be 21, 27, 34, 28, 29, 31, 37a.

In addition to these formal courses there is held a weekly colloquium, or meeting for the informal discussion of subjects not treated in the lectures, and for the presentation by the students of reports on important articles appearing in the journals.

It should be urged upon intending graduate students to prepare themselves, not only in ordinary laboratory measurements, but also in Mathematics, the lack of proper mathematical preparation being a serious drawback to the appreciation of the lectures. In particular may be recommended for study not merely those portions of the calculus which deal with the working out of many indefinite integrals, etc., but the theoretical portions which deal with the ideas of partial derivatives, definite integrals, and their practical manipulation, together with enough analytic geometry to involve the properties of lines and *surfaces* of the second order, and a fair amount of the elements of determinants. As suitable text-books for preparation may be recommended to the student Lamb's, Osgood's, or Gibson's *Calculus*, C. Smith's *Analytical Geometries*, and Muir's or Hanus's *Determinants*, Appell, *Eléments de l'analyse mathématique*, or Zoretti, *Leçons de mathématiques générales*, may be very strongly recommended to the intending student for study before and during his course at the University.

It cannot be too strongly urged that the student should, from the beginning, be able to read French and German with ease.

REQUIREMENTS FOR THE DOCTOR'S DEGREE

1. The ability to read at sight specimens of scientific French and German, tested before the first of November preceding the Doctor's examination by a committee of two members of the faculty.

2. The successful passing of an examination upon the general subject of Experimental Physics* and upon the subjects named above in the regular course in Theoretical Physics, as a *major* requirement, together with an examination in one *minor* subject, *to be determined in each particular case by the head of the Department of Physics*. This subject will be Mathematics or Chemistry.

3. The presentation of a satisfactory dissertation, involving a substantial amount of original work, and forming a contribution of value to pure science. The presentation of the dissertation is a prerequisite to examination. The time of residence necessary for the proper fulfillment of the above requirements will generally be at least three years, of which at least one will be very largely devoted to work on the dissertation. Students will not be encouraged to enter upon the work of a dissertation until they have acquired sufficient experience to enable them to specialize with advantage.

THE LABORATORY

The Laboratory occupies three floors of one wing of a large, well-lighted building free from disturbances, and admirably adapted to the purpose of a physical laboratory. On the ground floor is a room extending across the end of the building forty-five feet long by twenty-two feet wide, with windows on three sides, above which are three similar rooms. A lift running from the bottom to the top floor affords means of transporting apparatus, while its shaft furnishes space for manometer or barometer tubes. In the lower room are four piers with heavy stone tops, and two others below the floor on which can be placed heavy tables.

*Every student is recommended to provide himself with Winkelmann's *Handbuch der Physik* or Chvolson, *Traité de Physique*.

The storage-battery room contains sixty storage cells of ten amperes capacity, constituting the power-supply. Distributing switchboards allow the current from the dynamo or any section of the battery to be supplied to any of the rooms. On the same floor are three rooms constituting the workshop, one of the most important parts of a research department of Physics. Here are executed all repairs and alterations of apparatus, and the new apparatus requiring continual experiment is constructed. Most of the principal pieces of apparatus belonging to this department have been thus constructed.

On the main floor are the lecture room, the director's office, the large room used as the director's private laboratory and apparatus room, and three other convenient rooms for research.

The graduate laboratory is well equipped with apparatus for research besides having the facilities above described for the construction of instruments of any sort needed for that purpose.

The collegiate laboratory consists of six large, well-equipped rooms on the second floor of the Laboratory Building.

A radio station for experimental work has been installed, having two kilowatts capacity and a sending radius of a thousand miles by radiophone.

In addition may be mentioned a large collection of diagrams illustrative of mathematical physics, many of them being originals of the figures in Professor Webster's *Electricity and Magnetism and Dynamics*, and a number of interesting models used in teaching dynamics, thermodynamics, and electricity. This collection of drawings and models can probably not be matched in this country, and is continually being increased.

COURSES IN PHYSICS

1. PRIMARILY FOR UNDERGRADUATES

111. INTRODUCTORY MECHANICS. A course offered primarily for first year students who expect to take Physics 11 in their second year, and intended to supplement Mathematics 11 or 18. The fundamental laws of statics and dynamics are studied. Much attention is given to the solving of problems.

Students with a liking for Mathematics who cannot take a *major* or a *minor* in that subject will find in this course a suitable

elective. Open to those who have completed or are taking Mathematics 11 or 18.

Open to freshmen.

Three hours, through the year.

MR. ROOPE

11. GENERAL PHYSICS This course is intended for students who wish to make a somewhat detailed elementary study of the various parts of Physics. The course lays the groundwork for those who desire to take up Engineering, Chemistry, Medicine, or the teaching of science as a profession, and is the natural starting point for those wishing to do further work in Physics. During the first semester the work covers mechanics and heat; and during the second semester, electricity and magnetism, wave motion, sound, and light. The text-book for the current year is Duff's *General Physics*.

Open to those who have had Mathematics 11 or 18 and Physics 111. Five lectures and one laboratory period per week in the first semester, three lectures or recitations per week in the second semester.

Six hours, first semester; *three hours*, second semester.

PROFESSOR GODDARD AND ASSISTANTS

112. GENERAL PHYSICS. This course is intended for pre-medical students and for others who desire a three hour course in general Physics, covering much the same ground as Physics 11, and including laboratory work. Mathematics 11 or 18 prerequisite. The text-books are Millikan's *Mechanics*, *Molecular Physics and Heat* and Millikan and Mill's *Electricity, Sound and Light*. Two lectures or recitations and one laboratory period per week, together with one optional, unprepared hour of problems and discussion. Divisible course.

Three hours, through the year.

PROFESSOR GODDARD

12. ELEMENTARY THEORETICAL MECHANICS. Systematic presentation of theory by lectures and recitations together with the solution of problems. Mathematics 12 must be taken before or with this course. The text-books are Horace Lamb's *Statics and Dynamics* and *Slocomb's Theory and Practice of Mechanics*. Divisible course.

Three hours, through the year.

PROFESSOR GODDARD

Omitted in 1922-23.

13. ELEMENTARY THEORY OF ELECTRICITY AND MAGNETISM. Systematic presentation of elementary theory by lectures and recitations, together with the solution of problems, including the general principles of dynamo and motor design, and the solution of branched alternating current circuits. This course is of especial importance to those intending to specialize in Physics, Mathematics, or Engineering. Mathematics 13 must be taken before or with this course. A knowledge of the more important differential equations is advised. Starling, *Electricity and Magnetism*. Divisible course.

Three hours, through the year.

PROFESSOR GODDARD

14. MECHANICAL AND ELECTRICAL MEASUREMENTS. The first half of the course consists of a series of exercises in dynamics, including kinetics of translation and rotation, elastic properties of materials, and advanced problems in heat. The second half is a systematic course in electrical measurements, with a few advanced problems in light, and constitutes the laboratory portion of the work in Physics 11. One lecture and two laboratory periods per week.

Three hours, for two semesters, beginning with the second semester of the college year.

MR. ROOPE AND ASSISTANTS

15. THERMODYNAMICS AND OPTICS. Elementary theory of thermodynamics and optics, chiefly optics, presented by lectures and recitations, including work in practical photography. Mathematics 12 must be taken before or with this course. The respective text-books are *Treatise on Heat*, Edser or Perkins, and a *Treatise on Light*, Houstoun. Divisible course.

Three hours, through the year.

PROFESSOR GODDARD

Omitted in 1922-23.

16b. ADVANCED PHYSICAL MEASUREMENTS. This course deals with advanced problems in physical measurements, chiefly in optics and electricity. Physics 14 is prerequisite. One lecture and two laboratory periods per week.

Three hours, second semester. MR. ROOPE AND ASSISTANTS

17. ADVANCED GENERAL PHYSICS. Lectures and recitations. This course is intended for those desiring a more advanced presen-

19 History of Phys.

sp. conference course

3 hrs each sem.

Prof Goddard.

tation of mechanics, electricity, heat, and light than is afforded by Physics 11, yet who do not desire year courses in these special subjects. Although the treatments are less complete than in courses 12, 13, and 15, a good perspective of the subject of Physics may nevertheless be gained. Mathematics 13 must be taken before or with this course. Divisible course.

Three hours, through the year.

PROFESSOR GODDARD

Omitted in 1922-23.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

21. DYNAMICS. THE FUNDAMENTAL PRINCIPLES OF DYNAMICS, INCLUDING THE USE OF THE PRINCIPLE OF HAMILTON AND THE EQUATIONS OF LAGRANGE. This course will be repeated yearly.

PROFESSOR WEBSTER

22. (24, in 1921 Catalogue.) NEWTONIAN AND LOGARITHMIC POTENTIAL FUNCTIONS, ATTRACTION OF ELLIPSOIDS. This course is a necessary preliminary to the study of electricity and magnetism, of hydrodynamics, and of the figure of the earth.

PROFESSOR WEBSTER

23. (25, in 1921 Catalogue.) THEORY OF STRESS AND STRAIN, OF LINEAR VECTOR FUNCTIONS, AND ELASTICITY.

PROFESSOR WEBSTER

24. (224, in 1921 Catalogue.) INTRODUCTION TO THEORETICAL PHYSICS. This course is intended for students in Chemistry, Psychology, Economics, etc., whose mathematical training in college leaves something to be desired, and who nevertheless need to have some knowledge of the Calculus and of Mathematical Physics. The mathematical methods needed will be carefully explained in an elementary manner.

PROFESSOR WEBSTER

3. PRIMARILY FOR GRADUATE STUDENTS

25. (32, in 1921 Catalogue.) DYNAMICS. GENERAL PRINCIPLES, EQUATIONS OF LAGRANGE AND HAMILTON, METHODS OF HAMILTON AND JACOBI, SYSTEMS OF PARTICLES. This course is fundamental for the pursuit of all the others, and includes a detailed account of the principle of Least Action and the differential equations of Lagrange, preparatory to their application to other parts of Mathematical Physics such as optics and electricity.

PROFESSOR WEBSTER

26. (33, in 1921 Catalogue.) MOTION OF RIGID BODIES, AND THE THEORY OF MOVING AXES. This course takes up the theory of tops and rotating bodies, including the multitudinous applications of the gyroscope in engineering and war. PROFESSOR WEBSTER

27. (36, in 1921 Catalogue.) HYDRODYNAMICS, WAVE AND VORTEX MOTION, DYNAMICAL BASIS OF SOUND AND LIGHT. This course is the basis of applications of the theory of wave motion to sound, light, electromagnetism, and earthquake waves, and to the study of meteorology. PROFESSOR WEBSTER

The substance of the preceding courses is contained in Professor Webster's *Treatise on Dynamics*, B. G. Teubner, Leipzig.

For the theory of vibrations of all kinds, see course 37c.

28. (38, in 1921 Catalogue.) THE THEORY OF RESONANCE AND OF GENERALIZED IMPEDANCE WITH APPLICATIONS TO THE MEASUREMENT OF SOUND AND TO WIRELESS TELEGRAPHY AND TELEPHONY. The general theory of musical instruments and of acoustical engineering. This course takes up Professor Webster's original research in acoustics, and also shows how the methods there employed bear on the fundamental electrical phenomena involved in wireless telegraphy. It also takes up the practical questions involved in the design of auditoriums and questions of vibrations. PROFESSOR WEBSTER

29. (39, in 1921 Catalogue.) THE THEORY OF ELECTROSTATICS AND MAGNETOSTATICS, WITH THEIR RELATIONS TO ELASTICITY. PROFESSOR WEBSTER

30. (310, in 1921 Catalogue.) ELECTRO MAGNETISM, THE THEORY OF THE ELECTROMAGNETIC FIELD IN THE QUASI-STATIONARY STATE, ELECTRIC WAVES. The classical theories and the theory of Maxwell. The substances of these courses is found in Professor Webster's *Mathematical Treatise on the Theory of Electricity and Magnetism*, London, Macmillan & Co.

PROFESSOR WEBSTER

31. (311, in 1921 Catalogue.) RECENT DEVELOPMENTS IN ELECTRICAL THEORY, INCLUDING THE THEORY OF LORENTZ, THE PRINCIPLE OF RELATIVITY, AND THE EINSTEIN THEORY OF GRAVITATION. The application to the theory of electrons and to

the optics of the bodies in motion, with the study of differential quadratic forms.

PROFESSOR WEBSTER

32. (312, in 1921 Catalogue.) THE THEORY OF LIGHT. Propagation of light, diffraction, reflection and refraction, dispersion, double refraction, polarization, metallic reflection, magneto-optics, X-rays and crystals.

PROFESSOR WEBSTER

33. (314, in 1921 Catalogue.) GEOMETRICAL OPTICS. Properties of systems of rays, and their various aberrations. Hamilton's characteristic function or Eikonal. Applications to optical instruments.

PROFESSOR WEBSTER

34. (315, in 1921 Catalogue.) THERMODYNAMICS THERMO-AND ELECTRO-CHEMISTRY. The establishment of the two laws of thermodynamics, and their applications, by means of the methods of Gibbs and Helmholtz, to the examination of physical and chemical phenomena. Application to heat-engines, including steam, gas, and oil engines, the flow of gases and vapors, and the steam turbine. The conditions of chemical equilibrium, phenomena of electrolysis, osmotic pressure, and capillarity. Nernst's Theorem.

PROFESSOR WEBSTER

35. THE KINETIC THEORY OF GASES. The Maxwell-Boltzmann Theorem and the elements of statistical mechanics.

36. THE KINETIC THEORY OF BODIES. Radiation and the modern Theory of Quanta. The relations obtained from the laws of Kirchhoff, Stefan, Wien, and Planck, by the recent applications of thermodynamics, and the deviations from classical mechanics involved in theories of quanta.

PROFESSOR WEBSTER

37. THE PARTIAL DIFFERENTIAL EQUATIONS OF MATHEMATICAL PHYSICS. Laplace's equation, equation of thermal and electrical conduction, equation of wave motion, Helmholtz's equation, Lorenz-Beltrami equation, telegrapher's equation, and their special cases, in one, two, or three dimensions. This course will be divided into three parts:

a. Deduction of the equations. Vector analysis. The older methods, including those of Cauchy and Furier. Developments

in series, trigonometric series, Legendre's, Laplace's, Bessel's, Lamé's functions.

b. Methods of Green and Riemann-Volterra, boundary problems and characteristics.

c. Theory of vibrations and normal functions, genesis of partial differential equations and integral equations.

This complete course is probably the most important of all for the theoretical physicist, and treats a great variety of subjects from the most varied fields, grouping them all into a connected system and embracing all the methods of theoretical Physics.

The above lectures are to be found in Professor Webster's *Treatise on the Partial Differential Equations of Mathematical Physics*, which, being in press with Teubner, has been held up for nine years, but which may be expected to appear soon.

PROFESSOR WEBSTER

38. THE ELEMENTS OF INTEGRAL AND INTEGRO-DIFFERENTIAL EQUATIONS, AND THEIR APPLICATIONS TO MATHEMATICAL PHYSICS.

PROFESSOR WEBSTER

39. SELECTED CHAPTERS IN THE APPLICATION OF THEORETICAL PHYSICS TO COSMICAL PHENOMENA, INCLUDING PROBLEMS IN GEODESY, THE TIDES, METEOROLOGY, SEISMOLOGY, AND TERRESTRIAL MAGNETISM.

PROFESSOR WEBSTER

310. (322, in 1921 Catalogue.) LINEAR DIFFERENTIAL EQUATIONS. The applications of the theory of functions to the linear differential equations of the second order which arise in mathematical Physics. This course will be incorporated in the new book. (See course 37c.)

PROFESSOR WEBSTER

DEPARTMENT OF POLITICAL AND SOCIAL SCIENCE

PROFESSOR BARNES, MR. DEXTER, MR. FARNSWORTH MR. O'LEARY

The courses of this department furnish an introduction to Economics, Government, and Sociology.

The courses in Sociology are designed primarily for those who plan to engage in teaching the subject or in some phase of sociological research or practical social work. Besides a general his-

My dear Melville:-

✓ You might announce that History 14, 25, 216, 217; Psychology 202; and Mathematics 112b will be accepted by the department in fulfillment of the major requirement in Political and Social Science.

Sincerely,

H.E.B.

Sept 12 maybe omitted to my 100
minor in Hist, yr 1922-23
L.H.N.



torical survey of social theories and a critique of certain major principles of sociological interpretation, chief attention is given to an analytical study of fundamental problems and methods of approaching them.

The courses in Economics are designed to provide an historical and descriptive analysis of economic institutions, and an introduction to the leading theoretical principles which may be derived from a study of the development and nature of contemporary economic institutions.

The courses in Government aim to acquaint the student with the general principles of political organization and activity, and with the nature of the governments of the leading modern states. Particular attention is given to the government of the United States. As far as possible, the courses are devoted to an analysis of the actual working of political institutions and the nature of political processes, rather than to a formal description of the external structure of governmental machinery.

The attention of students majoring in Political and Social Science is directed to courses in Anthropogeography, International Law, the history of thought and culture, social and genetic Psychology, Educational Hygiene, Genetics, and applied Mathematics. Such courses may, with the consent of the Department, be counted as part of a major in Political and Social Science.

COURSES IN SOCIOLOGY

1. PRIMARILY FOR UNDERGRADUATES

11. INTRODUCTION TO THE SOCIAL SCIENCES. This is a general survey course designed primarily to give the student an informed basis and an intelligent attitude for further work in the Department. It comprises an introductory study of the main factors in the development of man, the beginnings and main stages in the evolution of social life, the family, industry, and the state. In the latter part of the course attention is given to certain major aspects of present-day industry, politics, and world organization.

Open to Freshmen.

Three hours, through the year.

MR. DEXTER

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

216. SOCIOLOGY. This course aims to develop a scientific as opposed to a dogmatic attitude toward social questions, to present an outline of social organization and institutions as related to social evolution, and to analyze certain leading principles of sociological interpretation.

Three hours, through the year.

PROFESSOR BARNES

224. CRIMINOLOGY AND PENOLOGY. This course describes the progress in the method of dealing with anti-social behavior. The growth of a scientific attitude towards the nature of the criminal and the function of incarceration is discussed. Then the progress of criminal jurisprudence is analyzed and the current agitation for sociological jurisprudence is studied. The course closes with a survey of the history of penal institutions and administration, including the more advanced programs of penal reform. The course is designed for students of social economy and those intending to enter the practice of law.

One hour per week, through the year.

PROFESSOR BARNES

Omitted in 1922-23. To be offered in 1923-24.

COURSES IN ECONOMICS

1. PRIMARILY FOR UNDERGRADUATES

13. INTRODUCTION TO ECONOMICS. A general introduction to economics, including a study of the principles of value and price, money and banking, international trade, wages and labor problems, combinations and trusts, socialism, public finance and taxation. Emphasis is placed upon a critical analysis of principles.

Open to Freshmen.

Three hours, through the year.

MR. O'LEARY

COURSES IN GOVERNMENT

1. PRIMARILY FOR UNDERGRADUATES

12a. AMERICAN GOVERNMENT AND POLITICS. A study of the structure and operation of American political institutions, including a description of the activities of federal, state, and municipal government and of the organization and operation of political parties.

Open to Freshmen.

Three hours, first semester.

MR. FARNSWORTH

12b. GOVERNMENTS AND PARTIES IN EUROPE. A Comparison of the constitutional and party systems of the leading European states, with an examination of the chief problems of a domestic nature confronting their respective governments, and the attitudes of political groups thereon.

Open to Freshmen.

Three hours, second semester.

MR. FARNSWORTH

DEPARTMENT OF PSYCHOLOGY

PROFESSOR SANFORD, PROFESSOR YOUNG

The Department of Psychology offers both elementary and advanced courses covering a considerable range of topics. All the facilities of the Department are available to any student registered in it, according to his ability to profit by them. Undergraduates of demonstrated competence will not be refused an opportunity to participate in researches for which they are prepared, and graduate students whose preparation is anywhere defective will have opportunity in the elementary courses for making up their deficiencies without the abandonment of their advanced work.

LIBRARY FACILITIES

The University Library contains an unusually large collection of psychological literature and literature in related departments, all of which is freely available to students. The Library is especially rich in scientific periodicals and the proceedings of learned societies, and maintains the files of seventy-five journals or other serials of a strictly psychological character. The Laboratory of Experimental Psychology has also an independent working library of psychological books and periodicals which are shelved in the journal room.

THE PSYCHOLOGICAL LABORATORIES

The Laboratories of Experimental Psychology occupy fourteen rooms on the upper floor of the Main Building of the University. They are well equipped with general apparatus, and have an annual appropriation sufficient to provide for the purchase and manufacture of such apparatus as may be required for special investigations. The workshop contains an excellent

equipment of tools and materials for the manufacture and repair of apparatus.

COURSES IN PSYCHOLOGY

1. PRIMARILY FOR UNDERGRADUATES

11. GENERAL PSYCHOLOGY. An introductory course designed to present the facts and laws of the mental life in their larger outlines and to lead the student to a rational understanding of his own mental processes. With this end in view the problems of action and of learning will receive especial attention, though no important aspect of the normal mental life will be neglected, and no effort will be spared to make all matters treated as real and concrete as possible by demonstrations, experiments, and class discussions. Text-book, informal lectures and collateral reading,

This course forms a natural approach to all the advanced courses offered and is a definite prerequisite to all except courses 201, 202 and 204.

Three hours, through the year. PROFESSOR YOUNG
An indivisible course, not open to freshmen.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

201. EDUCATIONAL PSYCHOLOGY. The aim of this course is a consideration of the learning process in its various aspects and in its dependence upon man's original tendencies and capacities. Such topics as attention, memory, thinking, play, morals, and religion will be taken up in their educational bearings. A brief account of normal human development from birth to the end of the school period will be given, together with a sketch of the methods of mental measurements and of the tests and scales for school accomplishment which have been worked out during the last few years. Text-books, discussions, informal lectures, and demonstrations. Open to juniors and seniors. Psychology 11 or its equivalent is a highly desirable preparation, but is not a prerequisite. Not a divisible course.

Three hours, through the year. PROFESSOR SANFORD
Omitted in 1922-23. To be offered in 1923-24.

202. SOCIAL AND ETHNIC PSYCHOLOGY. This course will be devoted to a study of man's instinctive tendencies as they show themselves in his relations with his fellow men. Such topics as custom, convention, psychic contagion, and the mob spirit will be discussed, as well as man's great social achievements such as language, government, morals, and religion. Informal lectures, text-book, discussions, and collateral readings. Open to Juniors and Seniors. Not a divisible course.

Three hours, through the year.

PROFESSOR YOUNG

NOTE: In 1923-24 there will be offered by Professor Young, in place of the above course, a two-hour course (202), on Social Psychology, and a one-hour course (204), on Anthropology.

203. EXPERIMENTAL PSYCHOLOGY. A demonstrational and laboratory practice course intended to acquaint the student with the chief types of psychological experimentation, to give him first-hand experience of fundamental psychical phenomena under experimental conditions, with practice in observing and reporting them, and to initiate him, so far as time permits, into the laboratory arts and procedures. Open to students who have completed Psychology 11 or its equivalent. Not a divisible course.

Two laboratory periods of *three hours* each, through the year.

Three hours, this year

PROFESSOR SANFORD AND MR. TINKER

3. PRIMARILY FOR GRADUATE STUDENTS

301. COMPARATIVE AND GENETIC PSYCHOLOGY. A general account of mental development in animals and in man. The work of the first semester will trace the increasing complexity of animal behavior from the micro-organisms to the anthropoid apes with special attention to experimental studies. The work of the second semester will begin with a review of the principles of human heredity and will then trace the bodily and mental development of the human individual from birth to maturity. The course will consist of informal lectures, collateral reading, and conferences for coöperative study.

Two hours, through the year.

PROFESSOR SANFORD

Not to be offered in 1923-24.

302. ADVANCED GENERAL PSYCHOLOGY. A study of the

2046 (see 204)
1 hr per Sem

major problems of psychological science in the light of biology, physiology, psychiatry, and the psychological laboratory.

Two hours, through the year.

PROFESSOR SANFORD

Omitted in 1922-23. To be offered in 1923-24.

303. MENTAL MEASUREMENTS. A theoretical and practical study of the schemes proposed for measuring native human capacity and for evaluating educational efficiency. Text-book and lectures together with practice work in testing and in statistical calculations.

Two ~~Three~~ hours, through the year. H-6 W

PROFESSOR YOUNG

To be offered in 1923-24.

304. PSYCHOLOGICAL JOURNAL CLUB. Devoted in 1923-24 to selected topics in current psychological literature.

One two-hour period, through the year. PROFESSOR SANFORD
3-5 W

305. RESEARCH. All students majoring in the Department of Psychology for either of the advanced degrees will be expected to undertake a suitable research problem under the direction of Professor Sanford or Professor Young.

Jan 1922-23
306. MENTAL AND NERVOUS DISEASES. Through the courtesy of the superintendent and staff of the Worcester State Hospital, the Department of Psychology is enabled to offer a course of sixteen lectures on Psychiatry and related topics. Some of the lectures will be given at the University and some (those requiring clinical demonstrations) at the Hospital.

One hour a week, second semester.

SUPERINTENDENT BRYAN AND OTHERS

307. SEMINAR ON EDUCATIONAL PSYCHOLOGY. This seminar is intended primarily for teachers and graduate students, and meets for a two-hour session on Saturdays. The work may be taken for an academic credit of one or two hours, depending on the amount done. During the year 1922-23 the Seminar is devoted to the psychological and educational writings of Dr. G. Stanley Hall.

One two-hour period, through the year.

possibly combined with 304.

PROFESSOR SANFORD

39 Ed. Psych.

Sanford

115 1 or 2 hrs credit

DEPARTMENT OF ROMANCE LANGUAGES

PROFESSOR CHURCHMAN. MR. MELLOR

See the statement of the general requirement in foreign language, page 35, for all candidates for the A. B. degree.

As now organized, the courses in this Department are planned with the following ends in view: French 11 and 12 are the basic language courses, in which it is the purpose to develop reading ability with at least a beginning of writing and speaking; when possible a student should take the full twelve hours of this sort of work. To the student who has completed 12, courses 13 and 14 offer an option between a continuance of general language work and a course limited to translation and literature; both may of course be taken. Those who have completed 13 and 14 may take 25 and 26—courses in which the literature of two important centuries is studied intensively. Prospective teachers will take course 27a.

A *major* in Romance Languages consists of at least twenty-four semester hours selected from the courses described below; but not more than twelve semester hours in elementary courses (French 11, Italian 11, and Spanish 11), may be counted in a *major*. The attention of students intending to *major* in Romance Languages is called to the statement concerning the required courses in Greek or Latin, on page ³⁶~~35~~.

COURSES IN FRENCH

1. PRIMARILY FOR UNDERGRADUATES

11. FOR BEGINNERS. Grammar, pronunciation, oral work, and composition, based on Cerf and Giese's *Beginning French*. Reading of easy modern French. The main purpose of the course is to develop reading ability. Not divisible.

Open to Freshmen.

Three hours, through the year.

MR. MELLOR

12. INTERMEDIATE. Reading of Modern French, with grammar, composition, pronunciation, and oral exercises. Course 12 is a continuation of course 11, and is also open to students who have had two years of high school French. Rapid review of Fraser and Squair's *Shorter French Course*. Reading from

such works as Lamartine's *Jeanne d'Arc*, France's *le Livre de Mon Ami*, Labiche's *le Voyage de M. Perrichon* or *la Grammaire*, Halévy's *un Mariage d'Amour*, selections from Daudet, Hugo's *Hernani*.

Open to Freshmen.

Three hours, through the year.

MR. MELLOR

13. ADVANCED FRENCH. This course is designed to continue and supplement the language work of course 12; it is also open to students who have had three years of high school French. Since the parallel course (14) offers ample opportunity for the development of reading ability, the emphasis in this course is placed upon the spoken and written language. The major part of the early work is devoted to a careful study of pronunciation and to a very rapid review of the elements of grammar in application to oral exercises. Immediately thereafter comes a survey of grammar and syntax in Fraser and Squair's *French Grammar* (new complete edition). Oral work in every day French is continued through the year. The later months are largely devoted to rapid reading in the French short story (Buffum's edition, Holt), the material being handled in French oral and written exercises as often as possible. This course will ordinarily alternate with French 14.

Open to Freshmen.

Three hours, through the year.

MR. MELLOR

14. GENERAL VIEW OF FRENCH LITERATURE. This course offers a general introduction to French literature with the triple purpose of meeting the needs of those who wish to gain some knowledge of that literature without doing the intensive linguistic work of French 13; of supplementing the work of French 13 by wider reading in good literature; and of laying the foundation for the specialized courses in the literature of particular centuries. For students entering with the minimum preparation the only text to be read is the Vreeland and Michaud *Anthology of French Prose and Poetry* (Ginn); but all who enter with more than this minimum are expected to read collaterally along lines to which their tastes may lead them. Brief outline of the facts of French literature and discussion of literary values based upon Strachey's *Landmarks in French Literature* (Holt). This

course is open to students who have passed French 12 or who have had three years of French in the high school.

Open to Freshmen.

Three hours, through the year. PROFESSOR CHURCHMAN

112. SCIENTIFIC FRENCH. Open to students who have had three years of high school French, or French 12 in college. Daniels' *French Scientific Reader* (Oxford Press), Luquiens' *Popular Science* (Ginn) and Herdler's *Scientific French Reader*, (Ginn).

Open to Freshmen.

Three hours, through the year. MR. MELLOR

NOTE: *This course may be counted toward the requirement in foreign language only by students majoring in Division A (Science), and may not be presented as the "third-year language course," to meet the divisional requirement in Division B.*

17. ADVANCED COMPOSITION AND ORAL WORK. Designed to provide teachers and other advanced students with a ready command of the spoken and written language. Review of the theory and practice of pronunciation upon a phonetic basis. Systematic study of grammar and syntax through a hasty survey of R. T. Holbrook's *Living French*, a thorough mastery of E. C. Armstrong's *Syntax of the French Verb*, and special study of selected topics by means of references to several standard authorities. Further familiarity with the spoken language is encouraged by use of the phonograph outside of class, and some special attention is given to the building of a vocabulary of common phrases and to systematic observation of French usage. Occasional themes in French. Open to students who have passed course 13 with credit, or who have done work equivalent in kind and amount. (A new course combining 110 and 27b.)

Three hours, through the year.

PROFESSOR CHURCHMAN

Omitted in 1922-23.

a *24. DRAMA OF THE NINETEENTH CENTURY. Reading and discussion of one play a week selected from representative authors beginning with the Romantics and ending with contemporary dramatists, *e. g.*, Dumas, *père*, Hugo, Vigny, Musset, Scribe, Dumas, *fils*, Augier, Becque, Sardou, Coppée, Rostand, Hervieu,

*To be offered in the future as course No. 19.

Bernstein, Brieux, Capus, Lavedan, Mæterlinck. This course meets in the evening and is open to qualified persons outside the student body. It may be taken for graduate or undergraduate credit. Though meeting but once a week, two hours of undergraduate credit may be secured by doing all the regular reading; one hour of credit will be given to undergraduates who do about half of each assignment. Fluent reading ability is assumed.

One meeting weekly, through the year.

7:30 *Open.*

PROFESSOR CHURCHMAN

*25. LITERATURE OF THE SEVENTEENTH CENTURY. A large amount of reading from the works of Corneille, Racine, Molière, Boileau, La Fontaine, Descartes, Pascal, La Rochefoucauld, Bossuet, La Bruyère, Mme. de Sévigné. Historical and critical survey of the literature of the period, based upon Abry, Audic and Crouzet *Histoire illustrée de la littérature française*. The main purpose of this course is to give the student a first-hand knowledge of the masterpieces of French classical literature, with a connected and critical knowledge of the literary history of the period. After a rapid survey of preceding centuries in Strachey's *Landmarks in French Literature* (Holt), and a brief outline study of the seventeenth century itself by means of Strachey, and the Vreeland-Michaud *Anthology*, (Ginn), the most important authors of the seventeenth century are intensively studied, with as wide reading from each as time allows, supplemented by class discussion and the use of the manual for necessary information. No lectures or translating, the time in the class-room being devoted to discussion and reading in the original.

Three hours, through the year.

PROFESSOR CHURCHMAN

Omitted in 1922-23.

NOTE: For admission to French 25 and 26, it is ordinarily expected that a student shall have passed French 14 with credit, but exceptionally good reading ability and a small amount of special preparation in the literature may occasionally make it possible to waive this condition.

**26. LITERATURE OF THE NINETEENTH CENTURY. Historical and critical survey, with wide reading from the most significant

*To be offered in the future as course No. 15.

**To be offered in the future as course No. 16.

authors of the century. The spirit, method, and plan of the work are similar to those of course 25. First there is a brief survey of all of French literature by means of a skeleton outline. Next comes an outline study of the nineteenth century by means of Strachey's *Landmarks in French Literature* and the Vreeland and Michaud *Anthology*. Then, after a somewhat detailed discussion of the later eighteenth century, follows the intensive study of the literary masterpieces of the nineteenth century, especially lyric poetry, drama, and the novel, accompanied by a discussion of the facts and comment contained in the Abry, Audic and Crouzet *Histoire illustrée de la littérature française* and in the writings of other critics. Few if any lectures, and no translation. For conditions of admission to this course see note above.

Three hours, through the year.

PROFESSOR CHURCHMAN

Omitted in 1922-23.

*27a. AIMS AND METHODS OF TEACHING FRENCH, with incidental reference to German and Spanish. Lectures and collateral reading. Practice teaching, under critical supervision, according to both the direct and textbook methods. This course is open to students who have passed with credit French 12, German 12, or Spanish 12, or who have done the equivalent of one of these courses. A knowledge of more than one language is desirable, but not necessary. Open to graduates and undergraduates.

Three hours, first semester.

PROFESSOR CHURCHMAN

Omitted in 1922-23.

COURSES IN SPANISH

1. PRIMARILY FOR UNDERGRADUATES

11. ELEMENTARY COURSE. The Hills and Ford *First Spanish Course*. Translation of simple prose. The first purpose of the course is to develop the ability to read, but a liberal use is made of oral and written exercises. Emphasis is divided between South America and Spain. Not divisible.

Open to Freshmen.

Three hours, through the year.

PROFESSOR CHURCHMAN

*To be offered in the future as course No. 18a.

12. ADVANCED COURSE. Combination of readings from Spanish literature with more advanced study of the language, oral and written. Review of the more difficult exercises in the Hills and Ford *First Spanish Course*, with references to Ramsey, and possibly further work in composition. Direct method work from Hanssler and Parmenter's *Beginners' Spanish*. Reading of representative masterpieces, e. g., *Don Quixote* (selections), plays by Lope and Calderon, one modern novel and one play, lyrics, and one book on some South American topic. Possibly a very brief outline of Spanish literature. Open to students who have passed course 11, or who have had two years of Spanish in the high school.

Open to Freshmen.

Three hours, through the year.

PROFESSOR CHURCHMAN

Omitted in 1922-23.

13. THIRD YEAR SPANISH. To be given when justified by the demand. Readings from Spanish literature and further work in composition and speaking. Open to students who have passed course 12, or who have had three years of Spanish in the high school.

Three hours, through the year.

PROFESSOR CHURCHMAN

Omitted in 1922-23.

COURSES IN ITALIAN

1. PRIMARILY FOR UNDERGRADUATES

11. ELEMENTARY COURSE. The chief purpose of this course is to develop as rapidly as possible the ability to read Italian easily and accurately. As soon as a hasty survey of the elements of the language has provided the student with the necessary materials, reading is begun, and thereafter oral exercises, composition, and grammar are used chiefly as a means to greater facility in reading. Wilkins' *First Italian Book*; Grandgent's *Italian Grammar* (revised edition); Farina's *Fra le corde d'un contrabbasso*; Fogazzaro's *Peregrinaggio*; *Italian Short Stories* (Wilkins and Altrocchi); Manzoni's *I promessi sposi*; possibly a play of Goldoni's. In the fourth quarter either the *Inferno* or the *Purgatorio* of Dante is read. Not divisible.

Open to Freshmen.

Three hours, through the year.

PROFESSOR CHURCHMAN

Degrees Conferred

In the Calendar Year 1922

BACHELOR OF ARTS

Francis Nelson Alquist	Charles Austin Metcalf
George Elisha Baker	Max Millman
James Edmund Bates	John Austin Moran
Mendall Benjamin	Aaron Nadler
Fredrick Lovell Bixby	Alanson Williston Parkes, Jr.
Elmer Irving Campbell	Allan Baker Partridge
Chenchang William Chang	Roland Edward Partridge
Angelos Theophilus Gabriel	Valmore Alexis Pelletier
Chaoush	Stewart Marquand Pratt
Curtis Damon	Alfred James Riani
Thomas Kelly Egan	Charles Edward Rouse
Kenneth Charles Everett	Robert James Rowland
John Vincent Ford	Robert Charles Schultheiss
Alexander David Ross Fraser	Sherwood Harry Small
Ernest Hard	Henry Herman Sommerman
George Franklin Howe	Ralph Eills Sturtevant
Warren Main Humes	Dwight Harrison Thayer
Armen Krikore Krikorian	George Robert Thompson
Albert LaFleur	Edward John Warmbier
Philip René Landry	Vinton Esten White
Edward Levine	Carl Albert Williams
Theodore Roosevelt Loomis	Warren Bailey Winn
Chi-Hsiung Yung	

With Honor

George Tashamka	Isaac Rabinovitz
Laurence Standley Foster	Everett Verner Stonequist

MASTER OF ARTS

Paul Edward Andrew	George Fletcher DesAutels
Dwight Sylvester Banks	Charles Alexius Dickinson
George Everett Boylan	Everett Carroll Donnelly
Guy Harvey Burnham	Emil Ericson
Ralph Loren Cheney	Earl Wilbur Flohr
Robert Josiah Conklin	Harold Joseph Gay
Israel Zelig Crock	Joseph Sidney Gould
George Tashamka Davis	Willard N. Greer

Howard Henry House	John Burke O'Leary
Ernest William Johnson	Thomas Preston Peardon
Sarah Evelyn Jones	William Lewis Phinney, Jr.
Clifford Kirkpatrick	Charles Scott Porter
Kenneth Hawley Knight	Attilio Mario Rizzolo
Joseph Kunin	Edward Dow Russell
Paul Emile Landry	William Henderson Ryer
Philip René Landry	Margaret Jane Saunders
Charley Alexander Lindley	Luke Edward Shannon
Malcolm Kairke Macdonald	Harold Manton Smith
Alexander Benjamin MacLeod	Mary Alice Smith
Ellen Augusta Maher	Miles Albert Tinker
Elisabeth Fallin Möller	Charles Cole Towne
Arthur Julius Nelson	Walter David Wood
John Henry Wuorinen	

DOCTOR OF PHILOSOPHY

Mildred Allen	George Allen Coe
Marjory Bates	Frederick Morse Cutler
Conral Cleo Callis	Henry Magnus Halverson
Mary Catherine Clune	Clarence Nichols Hickman
Herman Fletcher Kurtz	

Register

Explanation: Degree follows name; S-scholar; F-fellow; HF-honorary fellow; numbers 23 to 26-undergraduates; g-graduates; s-special students; ss-summer school student in 1922; Anc L-ancient languages; Rom L-romance languages; Educ-education and school hygiene; Hist- history and international relations; PSS-political and social science; other abbreviations obvious.

Major omitted-student has made no choice; state omitted-Massachusetts; town omitted-Worcester; street names refer to streets unless avenue is given.

Name	Classification	Major	Home Address	Worcester Address
Agard, Irving Howard		ss	Spencer	
Allen, Frank Alexander Ross		ss	Pawtucket, R. I.	
Anderson, Edmund Gustave Eric				
Anderson, Henry Charles	A.B.	Chem S	So. Woodstock, Conn.	940 Main
Armitage, Frank Guy B.H.		26		52 Olga Ave.
Armitage, Harold Butler	Hist s		Albany, N. Y.	166 Woodland
Aronsky, Rose Frances	PSS	23		93 May
Atwood, Mrs. Harriet T. B.		ss		65 Harrison
Augur, Jacob		ss		160 Woodland
Averill, William Armitage		25		27 Providence
Ayres, Margaret Eleanor	A.B.	ss		193 Lovell
Babcock, Royal Richardson		ss	Shrewsbury	
Ball, Edythe Ray	PSS	23	Norwich, Conn.	18 Crystal
Barber, Gus Nichols		ss		36 Clover
Barlow, Esther Perry		26		194 Beacon
Barsby, Phoebe Gadber		ss		55 Davidson
Bassett, Walter George		ss	Berwyn, Pa.	
Batthey, Gretchen Idella	PSS	26		95 Hillcrest Ave.
Belcher, Sophia Elizabeth		ss		263 Heard
Benner, Clyde Freeman		ss		34 Russell
Bergan, Jerome Frederick	Chem	26	Waldoboro, Me.	610 Park Ave.
Bergstrom, Francis William	Chem s		Northampton	54 Downing
Berman, Jacob	Ph.D.			
Beswick, Albert Edward	Chem HF		Stanford Univ., Calif.	24 Beaver
Black, Ward Norris	PSS	24	Colchester, Conn.	12 Oberlin
Blades, Ansley		26	Diamond Point, N. Y.	9 Hancock
Bliss, Lawrence Elliott		ss	Palestine, Ill.	
Boerthra, Robert E.		24	Ash Grove, Mo.	166 Woodland
Bourbonnais, Eugene E.	Engl	23	Springfield	16 Tirrell
Bousha, William John	Hist s			Worcester Acad.
Bowen, Grace L.		s		21 Crown
Boyle, Harry A.		ss		15 Irving
Boynton, Mabelle Mina	Educ s	ss		984 Main
Branom, Frederick Kenneth	Educ s	ss		18 Sturgis
Brazeau, Mrs. Stella Bennett		ss	Oneonta, N. Y.	
Brigham, Charles Albert	Geog F		Chicago, Ill.	23 Freeland
Brind, Abraham	ss		Warwick, N. Y.	
Brodie, William	Rom L	24	West Boylston	
Brophy, Rosemary	Phys	23	Boston	364 Mass. Ave.
Brown, Helen Leland	PSS	24		3 Spruce
Browne, Gorden Warner		ss	Saxonville	
Bryant, Frank Joseph		ss	Woonsocket, R. I.	
Bryant, Frederick A.B. M.D.		ss		21 Richards
Buck, Helen Angela	Phys	25		778 Main
Burnham, Guy Harvey A.M.	Biol HF		Springfield	778 Main
Burwick, Barnet James		ss		
Burwick, Hyman	Geog S			19 Bowdoin
Butterworth, Richard Harrington		26		86 Penn Ave.
Buxton, Kenneth Smith		26		86 Penn Ave.
Byrd, Mrs. Josephine	Hist	26	West Upton	
Byrd, Seawright	Chem	23		83 Brookline
Caase, Emilie Charlotte		ss		229 Belmont
Callahan, Anna Loretto		26	Murray, Ky.	299 Belmont
Callahan, Mary Jane	Hist g	ss		77 Downing
Callahan, Mary M.	Educ s			145 Woodland
Callis, Conral Cleo	Educ s	ss		145 Woodland
	Educ s			93 Elm
	Chem HF		Sebree, Ky.	973 Main

Cammett, Stuart Hyland Ph.B.	Geog g	Minneapolis, Minn.	6 Charlotte
Campbell, Elizabeth Salmon	Hist s ss		35 May
Caradonna, Henry	Chem 24		257 Shrewsbury
Carey, Thomas Albert A.B.	ss		8 Bedford Ave.
Carlson, C. William	Psyc s		5 Wilkinson
Carrigan, Katherine Agnes	ss	Hopkinton	
Chamberlin, Carrie Bailey	ss	Nashville, Tenn.	
Chang, Church	PSS 25	Shanghai, China	19 Shirley
Chase, George Bryant Jr.	Biol 26	Stratford, Conn.	65 Downing
Chelifou, Homer Peter	26		76 Orient
Chen, Durham Shih Fu	Hist 24	Peking, China	6 Charlotte
Chen, Jason Hawkins	PSS 24	Peking, China	15 Gates
Chen, Warren Huaying	Hist s		6 Charlotte
Choquette, Charles August	26		31 Chrome
Churchman, Mrs. Mary C.S.	ss		20 Institute Rd.
Clark, Wendell Justin	Engl 23	Wareham	102 Elm
Clarkson, Paul Stephen	26		5 Bernice
Cobb, Eben Salmon A.B.	ss	Clinton	
Cockroft, Grace Amelia Ph.B.	Hist F	Woonsocket, R. I.	23 Maywood
Cohen, Irving Charles	Hist 24		7 Gold
Collamore, Edna A.	Rom L s ss		11 Isabella
Conner, J. Eva	Hist ss		3 Shepard
Cooke, James Arthur	Phys 24	West Boylston	
Cook, Oliver R.	Hist s		8 Lisbon
Cook, William Robert A.B.	ss	No. Bennington, Vt.	
Cooney, Philip James A.B.	ss		39 Plantation
Corey, Veronica Claire	ss	Saundersville	
Corkham, Cecil Simpson A.B.	Educ s ss	South Lancaster	
Coty, Francis Joseph	Hist 24		301 Cambridge
Coulson, A. Gertrude BS.	Educ g		157 Dewey
Courtney, Ellen Agnes	ss		7 Sycamore
Cowdrey, Charles Francis	Rom L 24	Fitchburg	35 Maywood
Cronin, Frederick Timothy	Biol 24	Ballardvale	973 Main
Crossley, Lester Francis	26		130 Grand View Ave.
Cross, Mrs. Louise Holden	ss		17 Beeching
Crouch, Irvin Eugene	Engl 26	Groton, Conn.	85 Austin
Crowell, Bertha M.	Psyc s		68 Woodland
Crumley, Martha Mildred A.B.	Psyc s	Athens, Ohio	934 Main
Cunningham, Ruth	ss		5 Pelham
Dana, Elizabeth Mabel A.B.	ss		5 Forestdale Rd.
Davis, Frank Shepherd B.H.	Psyc g	Lincoln, Nebr.	72 Maywood
Dawson, George Alexander	Chem 26		7 Cottage
Day, Alice L.	Hist s		1 Norwood
Day, George Willis B.S.	ss	Lynn	
Dean, Stanley Edward	PSS 26		182 Austin
Denny, Nathan Joseph	Engl 24	New Haven, Conn.	12 Oberlin
Derby, Idetta Doris	ss	South Lancaster	
DesAutels, George Fletcher A.M.	Chem F	Kalamazoo, Mich.	15 Shirley
Desper, Irving Maynard	Chem s		41 Westminster
Dewar, Margaret Helen	ss		94 Lakewood
Dexter, Mrs. Elizabeth Anthony A.M.	Hist F		12 Beaconsfield Rd.
Dexter, Robert Cloutman A.M.	PSS HF ss		12 Beaconsfield Rd.
Dickie, Allan	Hist s		17 Davidson Rd.
Dickinson, Mrs. Alice T.	Educ s		25 Hammond
Dickinson, Charles Alexius A.M.	Psyc F		25 Hammond
Dimitroff, Vladimir Triphon A.M.	ss		1 Elmer
Dinger, Earl M.	Hist s		75 Birch
Dix, Charles Templeton	Hist 24	Southville	
Doe, Burton Edmund	26	Millbury	
Doherty, Richard Powers	26	Wilton, N. H.	
Donnelly, Everett Carroll A.M.	ss		87 Florence
Dooley, Mary Agnes	ss		70 Plantation
Dorward, Arthur Rex	PSS 25		22 Jacques Ave.
Dowd, Gordon Kingsbury	PSS 26		58 Cedar
Downes, Jean	Hist s		981 Main
Drohan, John Joseph	ss		10 Chatham
Duke, Mary	Hist s ss		11 Ormond
Dulligan, Ruth G.	Educ s		17 Seymour
Dumas, Theodore Eugene	26		126 Millbury
Dupree, Ruth I.	Psyc s		66 Francis
Durgan, Elford Sturtevant	Chem 26	West Boylston	32 Crystal
Easterling, Thomas Leslie	ss	Boston	
Eastwood, Floyd Reed P.B.E.	Educ S	Rochester, N. Y.	166 Woodland
Ekins, Herbert Roslyn	PSS 24	Hartford, Conn.	35 Maywood
Elliott, Ray Theodore	Phys 24	Antrim, N. H.	16 Tirrell
Epstein, George Nathan	PSS 26		59 Arlington

Holmes, Richard MacDonald	Hist 23	Mount Vernon, N. Y.	973	Main
Hood, Everett Wesley	PSS 24	Millville	940	Main
Hooper, G. Herbert	Biol 26	Niagara Falls, N. Y.	14	Oberlin
Hopkins, Frank Theodore	Hist 26	Spencer	26	Kingsbury
Horton, Clifford Emory B.P.E.	Educ S	Spokane, Washington	17	Freeland
Howard, Palmer Peckham	Hist 23	Waterford, Conn.	973	Main
Howe, Clarence Fletcher	Educ g		71	Lancaster
Howe, George Franklin A.B.	Geog S ss		486	Park Ave.
Howland, George Wendall A.B.	Educ s ss		79	Institute Rd.
Huang, T. C. A.B.	PSS g	Shanghai, China	3	Woodbine
Hunter, Miriam Harwood	ss		494	Grove
Husbands, Leroy Clinton B.P.E.	Educ S	Elizabeth, N. J.	166	Woodland
Illingworth, Robert Stanley A.B.	ss	Easton, Pa.		
Imlah, James Albert Henry B.A.	Hist S	New Westminster Can.	13	Gates
Inouye, Yuzo	ss	Japan		
Iwamoto, Masahito Laurence A.B.	ss	Japan		
Jacobson, Frank	Biol 23	East Greenwich, R. I.	12	Oberlin
Jackson, Eric Pearson A.B.	Geog S	Fall River	166	Woodland
James, Preston Everett A.M.	Geog g ss		166	Woodland
James, Mrs. Preston Everett	ss		166	Woodland
Johnson, Bertha Adair	ss	Farnumsville		
Johnson, Carl Albert	Hist 24		6	Malmo
Johnson, Emil	Hist s		8	Everard
Johnson, Ernest William A.M.	Chem F			Sunderland Rd.
Johnson, Harold Earl	26	West Boylston	15½	Richards
Johnson, Warren Charles B.S.	Chem S	Kalamazoo, Mich.	15	Birch
Jones, Stanley Cochrane	ss	Baldwinville		
Kalijarvi, Gustave Bernhard	26	Gardner	6	Charlotte
Kalijarvi, Thorsten Wain Valentine A.B.	Hist S	Gardner	973	Main
Keefe, William Timothy	Chem 24	Thorndike	4	Woodbine
Keegan, Eliza Jane	ss	Shrewsbury		
Keheew, Margaret Amy	ss	Leominster		
Kelleher, Mrs. Dorothy Bradford	ss		835	Pleasant
Kellogg, Raymond Harold	Chem 26	Plainville, Conn.	65	Downing
Kendall, Raymond Osgood A.B.	Psyc S	Grafton		
Kennedy, Margaret Christine	Educ s		29	Freeland
King, Charles Valentine	Chem 24	Hubbardston		Y. M. C. A.
Kirkpatrick, Cifford A.M.	PSS F	No. Leominster	16	Tirrell
Kisk, Esther C.	Geol s		51	Gates
Kline, Bertha Gertrude	ss	Saratoga Springs, N.Y.		
Knight, Ella Bartlett A.B.	ss	Omaha, Nebr.		
Knight, Marietta	Hist s		38	Hollywood
Knowlton, Edwin Ebenezer	Phys 23	Mansfield, Conn.	4	Coventry Rd.
Kunin, Joseph A.M.	Chem F		40	Salem
LaFleur, Albert A.B.	PSS S		3	Hancock
Lamb, Wallace Emerson	26	Bolton Land'g, N. Y.	9	Hancock
Landin, Harold Francis Wm.	Hist 24 ss		131	Malden
Lane, Ralph A.	Hist s		17	Wrentham Rd.
Lang, Florence Ardell	ss	Bradford		
Lanphear, B. Woodward A.B.	Hist S	Wuhu, China	11	Kingsbury
Lawton, Clarence Copeland	26		41	Olean
Lawton, Willard Elliott M.S.	Chem S		32½	John
Leary, James Francis	ss		3	Beaconsfield Rd.
Leonard, Elmer Crawford	PSS 24 ss	Milford, Conn.		Y. M. C. A.
Levenson, Aven Saul	26		16	South
Levenson, Benjamin	Hist 23		106	Salem
Liebmman, Louis	PSS 26	New Haven, Conn.	87	Florence
Lindberg, Viales Lethine	PSS 24		114	Belmont
Lipschitz, Abraham Maurice	Hist 24		45	Barclay
Little, James Guilford	26		3	Chadwick
Long, Edward James	Hist 23		586	Pleasant
Loomis, Richard Burton	26	Windsor, Conn.	973	Main
Loungway, Ferdinand John	26		973	Main
Loughrey, James Hugh Clement A.B.	Chem S		32	Wachusett
Lubin, Josiah	ss		150	Woodford
Lynch, Edward Harold	Chem 24		31	Fairhaven Rd.
Lyon, Leroy Albert	Engl 23	Spencer		
McCabe, Evelyn Mary A.B.	ss		74	Jacques Ave.
McCabe, Margaret Anna A.B.	ss		74	Jacques Ave.
McClusky, Donald Knight	Biol 26		7	Hawthorne
McDermott, Ellen G.	Rom L s		53	Maywood
McDuffee, Mrs. Gertrude	ss	Shrewsbury		
McElroy, Donald Arthur	25	Erie, Pa.	977	Main
McGillicuddy, Ellen T.	Educ s		6	Ripley Place
McGurren, William G.	s		87	Ward
McHugh, Hannah T.	Hist s		44	Dorchester

McIntyre, Grace Ellsworth	ss	Charlton	
McIver, Jean B.	Hist s		
McKelligett, Marguerite C. A.B.	Educ s ss	Warren	33 Williams
McKeon, Loretto Monica	ss	Kensington, Conn.	State Normal School
McLean, Francis Thomas	Hist 25		
McNally, Clarence Leo	26		119 Pilgrim Ave.
McNamara, Frank F.	Hist s		3 Wachusett
McQueeny, Theresa Frances	Geog s ss		38 King
Maeshima, Yutaka	ss		35 Westminster
Machlan, Louis Orville	Hist S	So. Lancaster	30 William
Macintosh, William Lyle	Math 26	No. Grafton	
Mack, Harry E.	Educ s	Leicester	
Macmillan, Jessie May	ss	Haverhill	
Maher, Margaret E.	Educ s		766 Pleasant
Mallozzi, Anna R.	Hist s		5 Nebraska
Mansur, Eric Woodall	Chem 23		22 Crystal
Marvel, Louise Nelson	ss		68 Woodland
Mason, Elsworth Scott	Geog 26		8 Isabella
Matteson, Estella Myrtle	ss	Oneonta, N. Y.	
Matfield, Henry William Jr. A.B.	ss	Lynchburg, Va.	
Matthews, Marietta B.E.	Geog g ss		37 Merrick
Mead, Raymond George	Hist 26	Springfield	21 Freeland
Melican, James Patrick A.B.	Hist S		33 Beaver
Miller, Margaret C.	Hist s		10 Chatham
Miller, Wilbert Logan	26		39 Shirley
Mills, Grace Evelyn	ss	Mt. Morris, N. Y.	
Mitchell, Ralph W. A.B.	Educ S	Eaton, Ill.	14 Oberlin
Montgomery, Eugene Prouty	PSS 23	Leicester	
Moran, John Austin A.B.	Psyc S		8 View
Mordoff, Richard Allan Ph.D.	ss	Ithaca, N. Y.	
Morse, Laura Lucile A.M.	Hist F	Arlington	4 Lucian
Moss, Edward Arthur David Jr.	26		19 Richmond Ave.
Mullany, Catherine Pauline	Hist s ss		51 Downing
Mullette, Charles Frederick A.B.	Hist F	Palmyra, N. Y.	27 Florence
Murphy, Mary Frances	ss		11 Gilman
Murphy, Theresa Margaret	ss	New London, Conn.	
Murray, John Edward A.B.	ss		3 Sheffield
Musselman, Charles Hansell	s		6 King
Nadler, Jacob Ernest	Biol 23		4 Franconia
Nardi, Alfred Thomas	PSS 25		24 Mendon
Neal, Arthur Morrill	Chem 23	West Boylston	
Nicholas, James Constantine	26		140 Exchange
Nelson, Arthur Julius A.M.	Hist g		24 Upsala
Nesbitt, Donald Frederick	PSS 25	Chicopee Falls	35 Maywood
Nichols, Corydon Richard	Math 23	Grafton	
Nicol, Theodore	26		31 Millbury
Nicoll, Robert Geoffrey Black	26	Andover	87 Florence
Norton, James Hayes	PSS 25	Whitinsville	87 Florence
Nuki, Denmatsu M.Ec.	PSS g s ss	Tokyo, Japan	9 Mt. Pleasant
Nute, Harold Alfred	s ss		16 Randolph Rd.
O'Brien, John Francis	Hist 23	Franklin	16 Tirrell
O'Brien, William Smith	ss		37 King
O'Connor, Delia Gertrude	Educ s	Spencer	
Oehme, Eugenia Martha	ss		22 Milton
O'Flynn, George B.	Hist s		5 Hartshorn Ave.
O'Hara, Abigail Loretta	Psyc s ss		20 Vernon
O'Leary, Ellen Josephine	Educ g ss		57 Channing
O'Leary, John Burke A.M.	Hist g ss		57 Channing
O'Leary, Mary B.	Educ s ss		57 Channing
Osborne, Lucy Arvilla	ss		52 May
Osborne, William Terry B.P.E.	Educ S	Pt. Jefferson, N.Y.	166 Woodland
Panarity, Gerim Musa	PSS 25	Brimfield	20 King
Park, Bessie L.	Educ s		35 May
Parkinson, Mae	ss		26 Dale
Parrish, Burgin Overton	25	Fayette, Mo.	180 Woodland
Partridge, Allan Baker A.B.	Hist S		423 Pleasant
Partridge, Roland Edward A.B.	Hist g ss	Boylston	43 Cross, Whitinsville
Patt, Hermann George B.D.	Geog g ss	Auburn	
Pearse, Harry	Biol 24	Southboro	
Peirce, Ronald Webster Lincoln	PSS 26	Springfield	18 Shepard
Perkins, Chester Orsen	ss	So. Lancaster	35 Maywood
Perkins, Ernest Ralph A.M.	ss		
Perlmutter, Nucia	Educ g ss	Chicago, Ill.	2 Valley
Perman, Samuel	Hist 23		29 Benefit
Perrault, Norman Henry	26		315 Grafton
Perry, Willis Clinton	s ss		78 Elm
Pierce, Frederick Goddard	Chem 24	Shrewsbury	17 Rockdale
Pigeon, Helen D.	Hist s		973 Main
			5 Dudley Place

Pitcher, Thornton Lewis	Hist 26		128 Maywood
Piper, Lewis Hamlin A.B.	Hist S	Walton, N. Y.	13 Gates
Platukis, Joseph George	Biol 26		11 Wade
Plumb, Philip Bissell	26	Litchfield, Conn.	19 Shirley
Pohlmann, Ellsworth Kenneth	Hist 26	New Britain, Conn.	65 Downing
Pooley, Richard Adelbert	26		67 Portland
Pope, Henry William	PSS 24		2 Eldred Ter.
Popko, Peter Frank	PSS 24		26 Ellsworth
Popoff, Helen	Geog s		108 Piedmont
Post, Clarence Willard A.B.	ss	Glenville, W. Va.	
Potter, Norwood Clarence	PSS 24		6 Bishop Ave.
Potts, William Gerald	Engl 25 ss		412 Chandler
Power, Edmund Paul	Engl 26		392 Chandler
Pownall, Helen Hannas A.B.	ss	Keyser, W. Va.	
Presson, Harold W.	Biol s		Worcester Acad.
Preissel, William Frederick	Chem 26	New Britain, Conn.	87 Florence
Price, Donald Lisle	PSS 25		10 Wayne
Price, Ronald William	PSS 24		10 Wayne
Pucillo, John B.P.E.	Psyc S	Newark, N. J.	166 Woodland
Ratigan, John Edward A.B.	Hist S ss		10 Lucian
Read, Naomi Williams	sa	Onset	
Reed, Grace May	ss	Springfield	
Reese, George Henry	Engl s	Boylston	
Regan, Ellen Frances	Educ s ss		48 Windham
Reidy, Edward Philip	g ss		104 Brookline
Reynolds, Paul Everett	Engl 25	Framingham	16 Shirley
Rice, Allan G.	Geog s		6 Isabella
Rice, George Edgar A.B.	Phys S	Hereford, Texas	9 King
Richmond, Eugene Laurian	Biol 24		87 Brookline
Ridgley, Douglas Clay S.M.	Geog HF ss		166 Woodland
Riffolt, Nils August	Phys 24		7 Shirley Terrace
Rikimaru, Jien	Educ F ss	Tokyo, Japan	12 Oberlin
Riley, Michael Francis	s ss		111 Beacon
Ripley, James Dudley	ss	Point Pleasant, N. J.	
Ripley, William Senter Jr.	Hist 25	Cambridge	973 Main
Robertson, Ina Cullom	Geog S	Centralia, Ill.	23 Maywood
Rochette, Roger Mellor	26		15 Colonial Rd.
Rodgers, Stanley Enoch Jr. A.B.	Chem S	Oak Bluffs	30 Woodbine
Rolston, Edith Marietta	ss		7 Rock Ave.
Roope, Percy M. A.B.	Phys g		15 Shirley
Rosen, Raphael A.M.	Chem F	Baltimore, Md.	42 Maywood
Ross, Burgess B. A.M.	Hist s ss	So. Lancaster	
Ross, Mrs. Hallie Loree Snider A. M.	Hist s ss	So. Lancaster	
Rush, Lillian M.	ss	Springfield	
Russell, Edward Dow A.M.	ss		4 Hudson
Russell, Joseph F.	Hist s	Grafton	
Ryan, Mabel Frances	ss	Gorham, Me.	
St. Amour, Florence	ss		65 Plantation
Salisbury, Jesse Wilder A.B.	Hist g	So. Lancaster	
Sanford, Mrs. Florence C.	Hist s	No. Grafton	
Saunders, Margaret Jane M.A.	Psyc F	Portland, Me.	144 Woodland
Saunders, Merrill Richard	PSS 24		716 Pleasant
Schultz, Isadore Erwin	PSS 24		25 Chamberlain Pky
Schwenning, Gustav Theodore A.M.	Hist HF ss	Springfield	
Schmucker, John Patrick A.B.	Chem S	Dallas, Texas	7 Gates
Scott, Mary Louise	ss		
Seder, Leonard	PSS 26		13 Barclay
Sessions, William Vyne M.S.	Chem F		15 Birch
Seward, Ralph Pray B.S.	Chem S	Bedford, Va.	23 Maywood
Shalloo, Jeremiah Patrick	Engl 24	East Boston	16 Tirrell
Shank, Marjorie Mae A.B.	Geog S	Milnor, No. Dakota	20 Gates
Shaughnessy, Anna	Hist s		15 Montvale
Shea, Elizabeth Marcella	ss		119 Pilgrim Ave.
Shea, Mary Ellen V.	ss		3 Forestdale Rd.
Sheedy, Anna Toole, B.A.	ss		87 Florence
Sherman, William Roderick A.M.	ss		12 Lowell
Sherwin, Everett G.	Hist S		4 Hancock
Shiflett, Chester Hines A.B.	Chem S	Plainview, Texas	4 Hancock
Shiflett, Mrs. Bessie W.	Geog s		111 West
Shipman, Fred Waldo	26 ss		2 Woodbine
Shipman, Julia Mary B.S.	Geog F ss	New Britain, Conn.	41 Columbia
Shor, David Meyer	Biol 24		
Silk, Ellen Madeline Howard	ss	Spencer	
Sleeper, Lewis Maxwell	Phys 25	Sherman Mills, Me.	Oxford, Mass.
Small, Sherwood Harry	ss		44 Greendale Ave.
Small, Ralph Leslie	Engl 26		18 Hartshorn Ave.

Smith, David	B.A.		ss	142	Burncoat
Smith, Eunice Woodward A.B.			ss	3	Hudson
Smith, Hampton		26	Gloucester	15	Gates
Smith, Louis Varance	Geog	26		5	Ash
Smith, Pauline Allis A.M.			ss	3	Hudson
Smith, Sheldon Bruce	Hist	23	Bantam, Conn.	16	Tirrell
Somers, Helen Marie B.A.			ss	33	King
Spillman, Gustavus L. A.M.			ss		
Springs, James Davis	Chem	26	Louisville, Ky.	4	Hancock
Spurr, Edward Lawrence	Engl	26	Merchantville, N. J.		
Stark, Mabel Claire M.S.	Geog	S	Marlboro		
Stanton, Cora Alice			ss	166	Woodland
Stacy, Chester R.	Educ	s	Chicago	180	Woodland
Stedman, Harry Prouty		26	Shrewsbury		
Stetson, William Clark	PSS	26	Gardner	6	Charlotte
Stevens, Mrs. Althea	Hist	s	Oxford	35	Maywood
Steven, Robert Stewart	PSS	24	Grafton		
Storer, Irving Lombard		26	Clinton	193	Vernon
Stowe, Allen Byron A.M.	Chem	F	Otsego, Mich.	3	Chamberlain Pky
Stratton, Alice Isabel		ss	Framingham	9½	Hancock
Sullivan, Mary Veronica	Educ	s ss		2	Lucian
Sundh, Constance E.	Hist	s		1	Devens Rd.
Supao, Ting M.S.	Phys	F	Peking, China	19	Shirley
Surabian, Simon	PSS	26	West Boylston		
Swan, Paul Richard	PSS	24		3	Circuit Ave.
Switzer, Jesse Elmer B.S.	Geog	HF	Valley City, N. D.	20	Gates
Tanner, Elmo		24		9	Hawthorne
Tarlov, Isadore Max	Biol	26	So. Norwalk, Conn.	78	Downing
Tashjian, John	Engl	26	Brockton	121	Highland
Taylor, Hiram Sylvanus Jr.	Biol	23	Islington	486	Park Ave.
Thayer, Dwight Harrison A.B.		ss			Montello
Thomajan, Puzant Kevork	Hist	23		634	Pleasant
Thomas, Josiah Lincoln		s		63	Francis
Thompson, George R.	Hist	s	Leominster		
Thompson, Lincoln	Chem	s		26	Sherbrook
Tierney, Helene Genevieve		ss	Springfield		
Tierney, Mrs. Sarah V.	Educ	s		2	Wyman
Tierney, Thomas Joseph	PSS	26		23	Seymour
Tinker, Miles Albert A.M.	Psyc	g ss	Huntington	16	Tirrell
Tomajan, Frances S.	Educ	s		62	Uxbridge
Toomey, John Joseph	Hist	26	Springfield	16	Tirrell
Torigoye, Kazutaro	PSS	S	Okayamakan, Japan	27	Oberlin
Tourville, Bertram A.B.		ss	Deep River, Conn.		
Towne, Edmund Barber	Chem	24	Stafford Springs, Ct.	16	Tirrell
Towne, Harold Goddell		26	Stafford Springs, Ct.	24	Maywood
Towne, Stanwood Bartlett Eugene	Chem	23		20	McKinley Rd.
True, Walter Francis A.B.		ss		136	Paine
Uchiyama, Genichi A.M.	Hist	F	Kuwanu, Japan	7	Hawthorne
Ward, Ethel G.	Hist	s		159	Chandler
Weber, Henry		ss	Spring Lake, N. J.		
Weber, John Henry		s		940	Main
Webster, Marion Lee A.M.	Geog	S	Old Town, Me.	908	Main
Weed, Bester Cicero		26		7	Cutler
Wen, I-Chuan	Psyc	24	Peking, China	6	Charlotte
Wesby, Maude E.	Hist	s		9	Home
Whitcomb, Charles Sumner Fremont					
	A.B.	ss	Ashland		
White, Lester Perrine	PSS	23	Brooklyn, N. Y.	973	Main
Whyte, Earle Forrester A.M.	Chem	F	Digby, Nova Scotia	23	Maywood
Willey, Malcolm Macdonald A.M.		ss	Putnam, Conn.		
Williams, John L.	Hist	s		44	Orne
Wilson, Norman Albert B.A.	Educ	S	Middletown, Md.	934	Main
Winn, Richard Wilkins	PSS	24		3	Sylvan
Winslow, Guy Herbert	Hist	g ss	So. Lancaster		
Wood, Albert Nolan		26	No. Grafton		
Woodward, Florence May		ss	Melrose		
Wooley, Charles H.	Psyc	s ss	Winchester		Shrewsbury
Wooster, Charles Bushnell	Chem	24	Deep River, Conn.	940	Main
Wvorinen, John Henry A.M.	Hist	F	Gardner	973	Main
Yanofsky, Jacob Isador	PSS	24		63	Harlem
Zweigbaum, Abraham	PSS	23	New Haven, Conn.	12	Oberlin

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SPENCER, MASS.

CLARK UNIVERSITY

Annual Commencement

June 11, 1923 at half past two

Order of Exercises

Music

Clark University Orchestra

Invocation

The Reverend Robert W McLaughlin
Pastor of Piedmont Congregational Church

Commencement Address

Dangers Confronting Civilization

Frederick M Davenport

Professor of Law and Politics, Hamilton College
State Senator, New York

Music

Conferring of Degrees

Benediction

The audience is requested to remain seated until the academic procession
has passed out

FOUNDER'S DAY CONVOCATION

1923

Music by the University Orchestra

Introductory Address on the Founder of Clark University
Dr Edmund C Sanford

Founder's Day Address

Dr G Stanley Hall, President Emeritus of Clark University

Music by the University Quartet

Conferring of Degrees

Music by the University Orchestra

CANDIDATES FOR THE DEGREE OF BACHELOR OF ARTS

Leroy Albert Lyon

Edward James Long

Abraham Brind

CANDIDATES FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

Hugh Llewellyn Keenleyside

Albertine Richards

Raphael Rosen

Andrew Fish

All degrees conferred as printed above

** Follow in English 1923 & under name Rosenfeld*

Candidates for Collegiate Degrees

Bachelor of Arts

Harold Butler Armitage
 Royal Richardson Babcock
 Lawrence Elliot Bliss
 Kenneth Smith Buxton
 Wendell Justin Clark
 Arthur William Ferguson
 Herman Finkelstein
 Gardner Patrick Henry Foley
 Frank Herbert Fowler
 Winston Earle Fox
 Albin Ernest Franz
 Joseph Goldberg
 Sherman Elias Golden
 Clinton Hartley Grattan
 Waldemar Herman Groop
 William Gunter
 Daniel James Heffernan
 Donald Ellwood Higgins

Roger Wolcott Higgins
 Richard MacDonald Holmes*
 Palmer Peckham Howard
 Frank Jay Jacobson
 William Timothy Keefe
 Edwin Ebenezer Knowlton
 Benjamin Levenson
 Eric Woodall Mansur
 Jacob Ernest Nadler
 Arthur Morrill Neal
 Corydon Richard Nichols
 John Francis O'Brien
 Samuel Perman
 Sheldon Bruce Smith
 Hiram Sylvanus Taylor Jr.
 Puzant Kevork Thomajan
 Stanwood Bartlett Eugene Towne
 Lester Perrine White

Abraham Zweigbaum

* Degree to be conferred upon completion of a small amount of additional work

With Honor

Frank Jay Jacobson

With High Honor

Donald Ellwood Higgins

With Highest Honor

Frank Herbert Fowler

Lester Perrine White

Annual Collegiate Honors

SENIORS

First Honors

Frank Herbert Fowler
 Sherman Elias Golden
 Lester Perrine White

Second Honors

Herman Finkelstein
 Donald Ellwood Higgins
 Frank Jay Jacobson

continued

First Honors

Second Honors

Harold Francis William Landin

FRESHMEN

Leo Arthur Goldblatt

Second Chapter

Elford Sturtevant Durgan

Walter Smith Hanover

Ellsworth Kenneth Pohlman

John Joseph Toomey

Master of Arts

୦୩୨ Albert LaFleur

James Hugh Clement Loughrey

~~W. R.~~ Louis Orville Machlan

James Patrick Melican

Charles Frederick Mullette

E-84 Ellen Josephine O'Leary

III+8+ William Terry Osborne

491R Allen Baker Partridge

" Lewis Hamlin Piper

Ps John Pucillo

WIR John Edward Ratigan

Plu George Edgar Rice

Stanley Enoch Rodgers Jr.

H+2R Joseph Francis Russell

John Patrick Schmucker

or Ralph Pray Seward

vi Chester Hines Shift

Ms. Julia Mary Shipman

Frederick Kenneth Branom

伊之彦 利基馬魯

William Roderick Sherman

Allen Byron Stowe

Jesse Elmer Switzer

Earle Forrester Whyte

Aug 10, 1952

See dated Aug 2, 1973 & letter by Dr. Wetzel.

7/10/57

Cluerville

personal copy. Please return.

Clark University Bulletin

Summer School Number



Worcester, Massachusetts

March, 1923

Clark University Bulletin

NUMBER 19

MARCH, 1923

Summer School Number

The Bulletin is published in January, February, March, April, May,
October, November, and December

Entered as second-class matter December 29, 1920, at the post office at Worcester, Mass., under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized January 24, 1921.

Calendar

- July 2 Monday 8 a. m. Registration begins
12 m. Opening Assembly
8-10 p. m. Reception to Members of the
Summer School by President and Mrs.
Atwood, at the President's House
- July 3 Tuesday 8 a. m. Lectures and recitations begin
- July 4 Wednesday Independence Day
- Aug. 10 Friday Work of the Summer School ends

A course of ten Public Lectures (titles to be announced) will be given on Tuesday and Thursday evenings from July 5 to August 7.

One or more field trips under the direction of the Department of Geography will be taken on dates to be announced.

Committee of the Faculty on the Summer School

THE PRESIDENT OF THE UNIVERSITY

THE DIRECTOR OF THE SUMMER SCHOOL

MESSRS. CHURCHMAN, MELVILLE, RIDGLEY

Schedule of Lecture and Recitation Hours

INSTRUCTOR	8	9	10	11	12	Afternoon
ATWOOD			Geography 213	Geography 111		
BROOKS	Geography 122				Geography 224	
CHURCHMAN			French 1	French 5		
COLLIER		History 11	History 10			
DIMITROFF	Biology 2					
DODD		English 6	English 7			
HODGE		German 2	German 1			
ILLINGWORTH				English 5	English 8	
JONES		Geography 282	Geography 181			
RICE		Biology 1				
RIDGLEY	Geography 261					Geography 162†
ROBINSON				History 12	History 13	
THOMAS		Geography 252		Geography 153		
YOUNG		Education 5	Education 6			

NOTE: All the above courses are Summer School courses. The symbol "SS" before the numeral, which distinguishes courses in the Summer School from those given during the regular academic year, is omitted. †Hour to be determined by the class.

The Summer School at Clark University

The Summer School as a department of the American institution of higher learning has developed largely within the last thirty-five years. Clark University was among the pioneers in this line, holding its first summer session thirty-one years ago, in 1892.

The early Summer School at Clark University was unique in confining the work of the entire session to a period of two weeks of intense application. The plan was "to fill each hour and each day as full of instruction and opportunity and each lecture as full of illustrations as possible." Lectures were held both in the forenoon and in the afternoon, and on several evenings. Instruction was given for the most part by professors and heads of departments. The program of subjects offered varied from Psychology and Pedagogy alone to Psychology, Philosophy, Pedagogy, Mathematics, Physics, Biology, and Anthropology; but after the first three sessions the work of the School was practically limited to Psychology and allied subjects. The sessions were held in the latter half of July, and there were nine under this plan, the last in the summer of 1903.

In 1920-1921, along with the reorganization of the University under President Atwood, plans were formed for opening the institution for a six weeks' summer session in July and August. While the new Summer School was designed along conventional lines, it was decided not to attempt to offer work in all departments, thus seemingly entering into general competition with other excellent Summer Schools in New England, but to concentrate on a few subjects in which the University seemed especially fitted to give summer instruction.

SUBJECTS OF INSTRUCTION

The session of 1923 will be conducted along the same general lines as those of the two previous years. As is well known, under the new administration Clark University is laying very especial emphasis on the study of Geography, and in that department of the Summer School the most varied and extensive program of courses will be found. The work of the session will center, as heretofore, in the departments of Geography and History.

Two new courses in Education are offered with special reference to the needs of the teachers who make up so large a percentage of the students of the School. Two courses in Biology are offered this year for the first time. The Department of English presents three new courses, and the course in Dramatics which proved so popular last session will be repeated. The demand for modern foreign language last summer was such as to lead to the addition of an extra member to the teaching staff, and a similar arrangement may be made this year if conditions warrant it. Two new courses are offered in French; and to the reading course in German previously offered an elementary course is added this year.

While no specific additions to the program of courses here announced are contemplated, requests from prospective students for work in subjects not announced will be carefully considered, and the organization of one or more extra courses is within the range of possibility.

The work of the Summer School is intensive, and courses meet five times a week. Enrolment in two courses is considered a full program, and many students, it is believed, will find it advantageous to concentrate all their energies on the work of a single course.

LOCATION AND BUILDINGS

Clark University occupies a tract of ground lying between Main and Woodland and Maywood and Downing Streets in the city of Worcester, situated about a mile and a quarter from the City Hall, on one of the principal trolley lines. Some cars run directly from the Union Station past the University; other cars make connections at the City Hall with cars running south on Main Street which pass the University.

Besides the campus with the academic buildings proper, the University owns a small athletic ground between Maywood and Beaver Streets, the Dining Hall and some unoccupied land at the corner of Woodland and Charlotte Streets, and the Hadwen Arboretum, on Lovell Street, about twenty acres in extent.

The office of the Summer School is located in the Main Building, which contains also the general offices of the University, as well as the administrative offices of the Collegiate Department. In the Main Building are the Assembly Hall and many of the lecture and recitation rooms, and in this building most of the

exercises of the Summer School will be held. The office of the President of the University is in the Geography Building.

In the Science Building are located the lecture rooms and laboratories of the departments of Physics and Chemistry.

All the classroom, library, and laboratory facilities of the University, so far as they pertain to the subjects of instruction offered, are at the disposal of students of the Summer School.

THE LIBRARY

The Library of the University was provided with a generous endowment by the founder of the institution, and affords especially favorable opportunities for study and research. It occupies a large and handsome building at the corner of Main and Downing Streets. The Library now owns almost 102,000 bound volumes and pamphlets, and the Reading Room receives approximately 500 journals. All the privileges of the Library are open to all members of the University, and each member has direct access to every book and journal.

In addition to the library facilities provided by the University, students may avail themselves of the privileges of other excellent libraries in the city. The Worcester Public Library contains some 245,000 volumes and makes accessible to the public about 600 newspapers and magazines. The educational books in the Circulating Department of the Public Library have been grouped together in a corner of the Delivery Room, where they may be inspected by persons interested. Teacher's magazines, with other interesting pedagogical material, may be consulted in the Children's Department. The library of the American Antiquarian Society, housed in the national headquarters of the Society, in Worcester, contains more than 145,000 volumes, and some 217,500 pamphlets. In addition to the Society's valuable manuscripts of the colonial period, it has an unequaled collection of books printed in America in the early period, and of American newspapers from 1660 to 1860.

ADMISSION TO THE SUMMER SCHOOL

Graduates of colleges, technical schools, normal schools, or secondary schools, college students, and teachers in schools of any grade are admitted as students upon submission of proper credentials. Other applicants will be admitted upon approval of their qualifications for the work which they desire to do.

REGISTRATION

Persons who desire to enter the Summer School should write for an application form at as early a date as possible and return it properly filled out. A registration fee of two dollars should be sent with the form when it is returned. This amount will be deducted from the tuition fee when the latter is paid. Checks should be made payable to the Bursar of Clark University.

It is exceedingly desirable that the registration of all students in all courses be completed on July 2. To this end students should as far as possible determine before the opening of the session through personal conference or correspondence with the Director or the various instructors the courses in which they expect to register.

As stated on page 6, enrolment in two courses is considered a full program, and students are not expected to register for more than two courses in which credit is desired. Permission to take a third course for credit may be granted in exceptional cases to students properly qualified to carry that amount of work successfully. Additional courses may be taken without special permission by those who do not desire credit in more than two.

Formal registration will begin Monday, July 2, at 8 a. m., in the Main Building. The opening assembly of the Summer School will be held in the Assembly Hall July 2 at 12 o'clock. All classes will meet on Tuesday, July 3.

CREDIT FOR WORK DONE

Some of the courses of instruction in the Summer School are of college grade, others are strictly graduate courses, and many are open both to graduate students and to undergraduates. The satisfactory completion of a course entitles the student to credit of three semester hours, which the Summer School will designate as undergraduate or graduate credit as the case may be.

Credit earned in the Summer School may be applied toward the fulfilment of the requirements for the bachelor's degree* or a graduate degree in Clark University, subject to the general regulations governing candidacy for these degrees.

Attendance at four sessions of the Summer School will ordinarily be considered as fulfilling the residence requirements for the degree of Master of Arts, provided the student devotes his

*Not more than six hours of credit earned in any one session, however, may be so applied. *Programs of college students taking work in the S.S. for credit must be approved by a committee consisting of the Dean, the Sec. of the S.S. & the Registrar. (C.B. 2/19/23)*

entire time during the sessions to graduate work. A thesis is required in addition to work done in courses. The degree of Doctor of Philosophy can not be secured by summer work alone.

A certificate, with a statement of work done and credit awarded, will be furnished at the close of the session to all students who desire it.

Work done in the Summer School can be counted toward the fulfilment of the requirements for degrees in the Graduate School and Collegiate Department of the University only by students who have fulfilled the regular requirements for admission to candidacy for those degrees.

TUITION

Students taking two courses will pay a fee of thirty dollars; those who receive permission to take a third course will pay an additional fee of ten dollars. Those who desire to take but one course may do so upon payment of a fee of twenty dollars, which will entitle them also to all the special privileges of the Summer School. The same charge is made for courses taken by students as auditors as for courses taken for credit.

Students registering in the Summer School who have not previously been enrolled in the Summer School or in some other department of Clark University are required to pay the University matriculation fee of five dollars. This fee need not be paid again by students who return for subsequent summer sessions, or who at any later time take up at Clark University the work of the regular academic year.

Tuition may be paid at any time before the opening of the session, and must be paid by noon of Saturday, July 7. Checks should be made payable to the Bursar of Clark University.

BOARD AND ROOMS

The University Dining Hall is open during the session of the Summer School, and provides table board at about seven dollars per week. Furnished rooms in the vicinity of the University may be secured at rates running from three dollars a week up. The Faculty House, on Woodland Street across from the University, and one or more of the college fraternity houses are available for the accommodation of a limited number of Summer School students.

OUTSIDE ACTIVITIES

It is the intention of the Summer School not only to provide a daily program of serious work, but to afford to students and instructors opportunities for relaxation and enjoyment as well. Among these are a course of public lectures, entertainments, and excursions to places of scientific or historic interest. The working schedule has been planned so that those who desire to take advantage of the excursions or independently to visit Boston or other neighboring cities at week-ends may do so without detriment to their regular work.

The University gymnasium and the Maywood Street athletic ground provide opportunity for both indoor and outdoor exercise. The summer climate of Worcester is pleasant; periods of excessive heat are rare; and Lake Quinsigamond, at the edge of the city and easily accessible by trolley, offers excellent facilities for boating and canoeing. Coes Pond, within easy walking distance of the University, is a favorite resort of summer bathers.

PUBLIC LECTURES

Two courses of lectures, open to members of the Summer School without extra cost, will be given on Tuesday and Thursday evenings at eight o'clock. Last year President Atwood gave a series of five Thursday evening lectures on our national parks, the Tuesday evening lectures being given by other members of the staff of instruction. In addition to the Tuesday and Thursday lectures the members of the school had the pleasure of hearing evening lectures by President G. Stanley Hall and Professor William H. Burnham. The program of lectures for the coming summer will be announced before the opening of the School.

For persons not members of the Summer School the price of a ticket of admission to all the lectures of the Tuesday and Thursday evening courses is five dollars; to all the lectures of either course, three dollars; to single lectures, seventy-five cents.

EXCURSIONS

Saturday excursions conducted by members of the Summer School staff have proved enjoyable features of the two past sessions. Last year two trips were taken under the direction of the Department of Geography. On July 22 a party went to Mount Tom by automobile, stopping at points along the way for physiographic observation and comment, and inspecting dino-

saur tracks near the Connecticut River. August 12 another automobile party traveled to the base of Mount Monadnock, stopping en route to examine glacial deposits. Meteorological observations were taken continuously during both trips, and physiographic and meteorological talks were given each time on top of the mountain. The return trip from Mount Monadnock was made by way of Harvard, Mass., where President and Mrs. Atwood entertained the party very pleasantly at supper.

DRAMATICS

Dramatic exhibitions given last summer were under the direction of Professor Illingworth, whose class in English 5 furnished the players. On July 25 two typical plays were given as illustrations of Irish Drama, Synge's *Riders to the Sea*, and Lady Gregory's *The Workhouse Ward*. On August 9 Shaw's *Candida* was presented. On the afternoon of August 16 a series of scenes from Shakespeare were given on the lawn of the President's House, the selections including portions of *As You Like It*, *A Midsummer Night's Dream*, and *The Merchant of Venice*.

THE SUMMER SCHOOL ASSOCIATION

For much that makes life about the University enjoyable during the summer session the School is indebted to the efforts of the Summer School Association, which was organized in 1921, and has for one of its prime objects the promotion of the School's social activities. The Association has held two winter reunions, the first on December 21, 1921, and the second on February 21, 1923.

THE SUMMER SCHOOL ROSTER

The names of students of the Summer School, with their home addresses, will be found in the General Catalogue, along with those of students in the Graduate and Collegiate Departments of the University.

Officers of Instruction and Administration

WALLACE WALTER ATWOOD, PH.D. Geography
B.S., University of Chicago, 1897; Ph.D., 1903. President of Clark University and Director of the Graduate School of Geography.

CHARLES BREWSTER RANDOLPH, PH.D. Director
A.B., Wabash College, 1896; A.M., Harvard University, 1902; Ph.D., 1905. Professor of German, Clark University.

HELEN GOSS THOMAS, A.B. Geography
A.B., Wellesley College, 1912. Instructor in Geography, Wellesley College, 1916-17; Research Assistant to Dr. Wallace W. Atwood, 1917-20.

CHARLES FRANKLIN BROOKS, PH.D. Meteorology and Climatology
A.B., Harvard University, 1911; A.M., 1912; Ph.D., 1914. Associate Professor of Meteorology and Climatology, Clark University.

DOUGLAS CLAY RIDGLEY, M.S. Geography
A.B., Indiana University, 1893; M. S., University of Chicago, 1922. Professor of Geography, Illinois State Normal University, 1903-22. Lecturer in Geography, Clark University.

Preston Everett Jones
~~CLARENCE FIELDEN JONES, B.S. (see Univ Catalog) Geography~~
~~B.S., University of Chicago, 1917. Assistant Instructor in Geography, University of Chicago.~~

THEODORE COLLIER, PH.D. History
A.B., Hamilton College, 1894; A.M., 1897; Ph.D., Cornell University, 1906. Professor of History, Brown University.

HOWARD ROBINSON, PH.D. History
A.B., Hamline University, 1908; B.D., Union Theological Seminary, 1911; A.M., Columbia University, 1911; Ph.D., 1916. Professor of History, Carleton College.

KIMBALL YOUNG, PH.D. Education
A.B., Young University, 1915; A.M., University of Chicago, 1918; Ph.D., Leland Stanford Junior University, 1921. Assistant Professor of Psychology, Clark University.

KENNETH STILLMAN RICE, SC.M. Biology
Ph.B., Brown University, 1913; Sc.M., 1915. Assistant Professor of Biology, Clark University.

- VLADIMIR TRIPHON DIMITROFF, A.M. Biology
 Ph.B., Brown University, 1920; A.M., 1921. Instructor in Biology, Clark University.
- LORING HOLMES DODD, PH.D. English
 A.B., Dartmouth College, 1900; A.M., Columbia University, 1901; Ph.D., Yale University, 1907. Professor of Rhetoric, Clark University.
- ROBERT STANLEY ILLINGWORTH, A.B. English and Dramatics
 A.B., Clark College, 1917. Student, American Academy of Dramatics, 1917-18. Professor of Public Speaking and Director of Dramatics, Lafayette College.
- PHILIP HUDSON CHURCHMAN, PH.D. French and Spanish
 A.B., Princeton University, 1896; A.M., 1903; Ph.D., Harvard University, 1908. Professor of Romance Languages, Clark University.
- THEKLA E. HODGE German
 Head of the Department of Modern Languages, Athol High School.
- CAREY EYSTER MELVILLE, A.B. Registrar
 A.B., Northwestern University, 1901. Associate Professor of Mathematics and Registrar, Clark University.
- DOROTHY ANNETTE DUGGAN Secretary to the Director

Courses of Instruction

Courses marked with an asterisk may be taken for graduate credit.

GEOGRAPHY

SS111. PHYSICAL GEOGRAPHY. Introductory Course. The influence of exposure to weather conditions, the work of rivers, glaciers, waves, winds, and ground waters will be analyzed in detail, and the history of the land forms due to the work of these agents will be presented. The great scenic features of this continent, such as the Grand Canyon of the Colorado, the lofty mountains, the great plateaus, Niagara Falls, the Great Lakes, and certain of the shore-lines will be used as the basis for developing many of the principles involved in the origin and history of topographic features. The physiography of New England and of other selected areas will be analyzed in detail. Field excursions will be conducted to illustrate some of the work of the course.

Daily, except Saturday, at 11.

MR. ATWOOD

SS122. THE PASSING WEATHER. Daily observation, interpretation and prediction of local weather. Physical properties of the atmosphere. The elements, temperature, pressure, winds, and moisture, of the atmosphere, and their interrelations in various types of weather. How to read and use the weather map. The present status of weather forecasting. Frost, storm, and flood warnings; the work of the United States Weather Bureau. The weather factor in agriculture, commerce, aeronautics, and public health.

Daily, except Saturday, at 8.

MR. BROOKS

SS153. HUMAN GEOGRAPHY FOR THE ELEMENTARY GRADES. A course planned especially for teachers who are endeavoring to humanize geography in the class room. Studies in the relationships between geography and the life and activities of people; the effects of location, surface features, climatic conditions, and natural resources. The course will include lectures, type studies, model lessons, and suggestions for the use of supplementary material.

Daily, except Saturday, at 11.

MRS. THOMAS

Coll. Bd., April 11, 1923

Report of the President on the subject of college credit for summer school courses in Geography was received and accepted. The report is as follows:

The following courses are not open to students of the college for A.B. credit:

- 84151. Human Geography for the Elementary Grades
- 84213. The Regional Treatment of Geography
- 84261. The Teaching of Geography in Normal Schools
- 84313. Research in Regional Geography
- 84323. Research in Climatology.

Clark University
HOME STUDY DEPARTMENT
WORCESTER, MASSACHUSETTS

WALLACE W. ATWOOD
President of Clark University

DOUGLAS C. RIDGLEY
Director of Home Study Department

KATHERINE REID
Clerk

January 3, 1924.

MEMORANDUM FOR MR. MELVILLE

My dear Mr. Melville:

The enclosed letter from Miss Katherine C. Johnson indicates the sort of report which she is desirous of having. Miss Johnson is one of the group of Peoria teachers who were here last summer. She is now living with relatives in Brooklyn, New York, and has been serving most efficiently as a substitute teacher in the city schools of Brooklyn. She has had several invitations from principals to go to their schools because of her capable work as demonstrated in the early part of the year.

- It seems that she wishes an official statement from the University indicating the total number of hours spent in recitation and preparation for the work which she did here last summer. It seems that the sixty hours of work indicated in her letter means the equivalent of 60 hours of recitation or study. I think that it is safe to assume that Miss Johnson gave to each of her studies last summer the equivalent of 25 hours of recitation work and 50 hours or more of preparation work.

Will you read the letter carefully and then send to Miss Johnson such an official statement as you think her request asks for with reference to hours. Both courses which she took were courses presented from the teacher's standpoint. I conducted the course in Field Geography, and the whole problem was the question of local field geography and its application to the actual teaching of geography in the grades. I was a member of Dr. Atwood's class in which Miss Johnson took her other course, and his course was strongly a pedagogical course which might properly be named, "The Teaching of Geography by Means of the Regional Method." If her requirement is that of pedagogical work, these two courses were definitely pedagogical in their presentation and application. Of course if the requirement is that of psychology or pedagogy or education, these studies would not comply with the requirements. Your letter, however, may show clearly that the geography courses were of a pedagogical nature and real courses in geography method as well as courses in the subject matter of geography. If you wish to have any further information from me in this matter before you make out your official statement, do not hesitate to call on me.

Very sincerely,

DCR.R

Douglas C. Ridgley

✓ SS162. LOCAL FIELD GEOGRAPHY. A study of Worcester and vicinity with reference to the needs of the elementary school. Field trips will be made in the afternoon. Topics will be selected for study which are typical of other localities. Geographic factors will be studied in relation to the city-plan, the transportation, the business section, the manufacturing districts, and the surrounding region. The Saturday trips planned for the Summer School will be part of this course. The course will enable the teacher to use field lessons in any locality and to adapt them to any grade. Afternoons are to be kept free for field work. Class meetings as occasion requires at an afternoon period to be determined by the class.

MR. RIDGLEY

SS181. ECONOMIC AND COMMERCIAL GEOGRAPHY. A study of production and trade as influenced by the natural environment. The production of and trade in the more important commercial products of farm, range, forest, mine, factory, and sea; continental trade routes; oceanic trade routes; the movement of commodities; major commercial divisions and trade regions of the world.

Daily, except Saturday, at 10.

MR. JONES

*SS213. THE REGIONAL TREATMENT OF GEOGRAPHY. A brief sketch of the history of the study of geography will suffice to demonstrate the necessity of some plan or plans for the scientific and pedagogic organization of the subject matter. Physiographic, climatic, vegetal, economic, and natural regions have been proposed as the basis of organization. The educational and scientific advantages of the various plans will be considered and illustrated by examples from various parts of the world.

*limited
to grad.
study*

Daily, except Saturday, at 10.

MR. ATWOOD

*SS224. CLIMATIC ENVIRONMENTS. Although this course deals primarily with climates and how they affect man and his means of livelihood, its first part necessarily comprises general climatology, *i. e.*, the climatic elements and their combination into such types as marine, continental, and mountain climates. The climates of the world are studied in a comparative way, especially to make manifest the similar human responses to similar climates in widely separated parts of the world, and local peculiarities and effects. Changes of climate in geological and historical time,

and their importance in man's development and migrations are discussed.

Daily, except Saturday, at 12, or at an hour to be arranged.

MR. BROOKS

*SS252. THE GEOGRAPHICAL CHANGES RESULTING FROM THE WORLD WAR. This course has been planned to cover systematically the changes in political boundaries in Europe, Asia, and Africa which have been wrought by the World War and by the peace treaties which brought it to a close. It will include a study of the geography and ethnography of Central and Eastern Europe as a basis for an understanding of the comparative assets and liabilities of the new nations which have been carved from the former empires of Russia, Austria-Hungary, and Germany. The disposition of the former German colonies in Africa and other parts of the world will be treated, and special attention will be given to their economic and strategic value to their new owners. The course will be concluded with a brief study of the geographic reasons underlying the desires of the European powers for spheres of influence in Asia.

Daily, except Saturday, at 9.

MRS. THOMAS

*Not open to under-
grade
for credit*

*SS261. THE TEACHING OF GEOGRAPHY IN NORMAL SCHOOLS AND TEACHERS' COLLEGES. This course is planned to meet the need of normal school teachers, city grade supervisors, principals, teachers preparing for critic positions in normal schools, and for experienced teachers of geography. Recent courses of study in geography are examined and compared. The relation of the normal school courses to the teaching in the elementary school is considered. Each member of the class may select a topic bearing directly on next year's work for special study.

Daily, except Saturday, at 8.

MR. RIDGLEY

*SS282. GEOGRAPHY OF NORTH AMERICA. A study of the continent of North America by natural regions, based on the outstanding features of the natural environment and the consequent economic response. The present economic development and the possibilities of each region, as related to position, climate, surface features, mineral resources, vegetable and animal life, coast lines, and adjacent seas. In each region emphasis will be placed on a geographic interpretation of the leading economic activities.

Daily, except Saturday, at 9.

MR. JONES

THEODORE FRELINCHWYSIN COLLIER (1874-1963)

- 1874 July 9, born in Montville, New Jersey, son of Rev. Isaac Henry, a minister of the Reformed Church of America, and Frances Miller Collier
- Attended Clinton Grammar School in Clinton, New York; also private tutors
- 1894 A.B. from Hamilton College
- 1897 A.M. from Hamilton College
- 1894-1899 Taught in secondary schools
Instructor Pritchett College, 1894-1895 (Missouri)
Taught history in Englewood School, New Jersey, 1895-1897
Taught at Brooklyn High School, 1897-1899
- 1899-1902 Studied at Union Theological Seminary, B.D. degree
- 1902 July 17, married Janet M. Sheldon (Cornell '94) at Buffalo, New York
- 1902-1904 Studied as a Prize Student from UTS at Universities of Berlin and Marburg
- 1904-1905 Studied at Cornell University, Fellow
- 1906 Received Ph.D.
- 1905-1907 Instructor at Williams College
- 1907-1911 Assistant Professor at Williams
- 1911-1917 Associate Professor of History at Brown University
- 1914, 1915, 1916 Summers, Middlebury College
- 1917-1944 Brown University, Professor History and International Relations; twenty-two years as Head of History Department (Retired 1944)
- 1918-1919 World War I, on YMCA staff with 26th Division of A.E.F. in France
- 1922&1923 Clark University Summer Session History
- 1924-1925 Summer, visiting professor at Constantinople College, Turkey
- 1924, 1926 Summer-session professor at Columbia University
- 1928 Received L.H.D. Hamilton College
- 1945-1952 Visiting professor at Rollins College ~
- 1963 April 9, died at Tryon, North Carolina
April 11, interment at Brookside Cemetery, Watertown, New York

Member: New England Teacher's Association
New England Historical Association, President 1925-1926
American Historical Association
Rhode Island Historical Society
American Association of University Professors
Providence Art Club

Wolfe, Gertrude M. 1894-1900

1867

Winter Park University Club
Holland Society of New York City
Chi Psi (Cornell)
Phi Beta Kappa
YMCA
City Council, Providence, R.I., 1929-1930
Rhode Island Consumers' League, President

Author: A New World in the Making, pub. 1919

Contributed many articles to various historical publications

Over forty articles of church history in the 11th edition of
the Encyclopedia Britannica

Contributed to the Dictionary of American Biography

Survivors: Harriet Sheldon Collier, b. April 18, 1905 (daughter)

John Sheldon Collier, (son, b. Sept. 26, 1907); is currently
a member of the faculty of St. Paul's School in Concord, N.H.

[illegible]

Contributed to the Department of Business Economics
the University of Wisconsin
Over forty articles of general interest in the field
Contributed many articles on various financial subjects
Authors: A few books in the market, Nov. 1908

(The following information was obtained from a review of the files of the FBI New York Office.)

*SS313. RESEARCH IN REGIONAL GEOGRAPHY. For students who are prepared and ready to undertake thesis work in partial fulfilment of the requirements for a graduate degree.

Hour to be arranged.

MR. ATWOOD

*SS323. RESEARCH IN CLIMATOLOGY. For students who are prepared and ready to undertake thesis work in partial fulfilment of the requirements for a graduate degree.

Hour to be arranged.

MR. BROOKS

HISTORY

*SS10. A SURVEY OF CONTEMPORARY EUROPE. The subject of study in this course is post-war, present-day Europe. The aim is not only to describe, but also, and chiefly, to interpret and evaluate. So far as the nature of the subject permits, the method will be historical, *i.e.*, events, developments, and situations, however recent, will be dealt with as phenomena to be analyzed, explained, and understood in the light of anterior developments. The work will be carried on by informal lectures, frequent reports on assigned topics, and general classroom discussion. The contents of the course will include the various treaties of peace; problems of reconstruction and readjustment; national and international finances and the problem of economic recovery; international conferences, their aims and accomplishments; the League of Nations in operation; principal political and social changes in the various states. The course is intended to serve as an introduction to current world politics.

Daily, except Saturday, at 10.

MR. COLLIER

*SS11. EUROPEAN HISTORY, 1660-1914. A general course treating of the principal factors, political, economic, social, and cultural, in the development of modern Europe; a history in broad outlines, with the attention centered upon the great shaping forces and determining events. Among the major topics are: Absolutism and the Old Regime; commercial rivalry and international wars in the eighteenth century; the French Revolution; the Napoleonic era; reaction and repression; the Industrial Revolution and its social and political effects; Nationalism in the nineteenth century; the rise of new powers; economic development and colonial expansion; military and naval competition; ententes and alliances, and the steps leading to the outbreak of the Great War; scientific and technical progress. Method: lectures, frequent reports on assigned topics, and periodic quizzes. The require-

ments may be adapted, at least partially, to the individual needs of the students enrolled. Teachers of history taking the course will, if they desire, be afforded opportunity to confer with the instructor regarding methods or other practical problems.

Daily, except Saturday, at 9.

MR. COLLIER

*SS12. HISTORY OF MODERN ENGLAND. A general survey of English history since 1485. Particular attention is given to the more important economic, industrial, and social changes in their influence on politics. Emphasis is laid on the following topics: the commercial revolution and the attendant political, intellectual, and religious movements; the political revolution of the seventeenth century and the rise of the cabinet system; the growth of the interest in oversea expansion and the development of imperial problems; the industrial revolution; the transition from the old to the new colonial system; the growth of democracy in the nineteenth century; the development of the new imperialism; the effects of the international situation on modern England.

Daily, except Saturday, at 11.

MR. ROBINSON

*SS13. HISTORY OF ANCIENT AND MEDIEVAL CIVILIZATION. This course traces the changes in interests, opinions, and attitudes of mind on the part of the intellectual classes from Oriental antiquity to the sixteenth century. The following topics are treated: the antecedents of intellectual history; primitive reasoning; the general range of Greek speculation and its transmission to western Europe by the Romans; the development of the Christian conception of man and the world; the medieval treatment of the Christian and classical heritages; the origin of the universities, and the character of university teaching in the later Middle Ages; the slow decline of scholasticism in the fourteenth and fifteenth centuries; the intellectual aspects of Humanism and the conditions that led to the birth of the modern scientific spirit. Designed as a general cultural course and as a background for teachers of ancient and medieval history. The guide for the course is J. H. Robinson's *Outline of the History of the European Mind*. This course provides the logical introduction to course SS9, given in the session of 1922.

Daily, except Saturday, at 12.

MR. ROBINSON

EDUCATION

SS5. EDUCATIONAL PSYCHOLOGY. This is an introductory course to psychology as it bears on the problems of education.

The principal emphasis will be put upon individual differences. Some attention will be paid to the learning process as affected by these differences. The chief topics will cover: the factors of heredity and environment in individual differences; differences due to race, family, sex, and social status. Materials from experimental investigations will be presented and application made to school problems. Readings, lectures, and class discussions.

Daily, except Saturday, at 9.

MR. YOUNG

SS6. EDUCATIONAL SOCIOLOGY. This course will deal with the study of education in its social aspects. Material will be introduced briefly on the social-psychological nature of the individual, but the principal attention will concern the school as a primary group:—the process of socialization in the classroom and in play, the psychology of leadership, cooperation, etc. Readings and reports will be called for.

Daily, except Saturday, at 10.

MR. YOUNG

BIOLOGY

※
SS1. EVOLUTION. The aim of the course will be to provide a foundation and materials from which may be developed an individual appreciation of man's place in nature. The content of the course will include a consideration of the various conditions which led to the formulation of the doctrine of organic evolution, together with an analysis of the subsequent findings which have affected its validity. Attention will be paid to the philosophical and religious phases of the historical development of the idea, and particular emphasis will be laid upon its present status and significance. Previous biological training, although desirable, will not be assumed. The course will be conducted by means of lectures, collateral reading, and discussions. The right is reserved of withdrawing this course if elected by less than ten students.

Daily, except Saturday, at 9.

MR. RICE

SS2. ^xBACTERIOLOGY. The aim of the course will be to develop in the general student a first-hand acquaintance with bacteria; an appreciation of their significance to human welfare and a knowledge of the technique by which these organisms can be controlled. The content of the course will include a consideration of the methods of studying bacteria, involving problems of isolation, determination of unknown species, modern methods of handling infectious diseases in laboratory and in the sick room,

※ ~~may not~~ be counted in partial fulfillment of req. in dist.
x May be counted in partial fulfillment of req. in dist.
※ x May be included in a major in Biology.

sanitation, including bacteriological examination of water and milk. Special stress will be laid on scientific information and experimentation as the basis of modern hygiene and its application. Previous biological training, although desirable, will not be assumed. Opportunity will be afforded, however, in special work for individual students who may show adequate preparation. The course will be conducted by means of lectures, discussions, readings, and laboratory work. The right is reserved of withdrawing this course if elected by less than ten students.
Daily, except Saturday, at 8. MR. DIMITROFF

ENGLISH

not
in
wait
not
official
✓ SS5. DRAMATICS. Amateur and educational dramatics in schools and colleges. The selection and staging of plays; the building of scenery; stage make-up. During the course at least one public performance will be given; rehearsals will be conducted during the regular periods by members of the class. The work will through conferences be directed to meet the individual needs of the students.

Daily, except Saturday, at 11.

MR. ILLINGWORTH

(*) SS6. MODERN DRAMA IN ENGLISH. A survey of the entire field of modern drama, English and foreign. Daily reports and discussion. Critical papers or a one-act play required.

Daily, except Saturday, at 9.

MR. DODD

*SS7. A DECADE IN BIOGRAPHY AND LETTERS. A study of the noteworthy achievements in biography and letters during the last ten years. Daily reports and critical papers required.

Daily, except Saturday, at 10.

MR. DODD

SS8. ORAL AND WRITTEN COMPOSITION. Special emphasis will be laid upon the study and the writing of book reviews, dramatic criticism, short narratives, and informal essays. Part of the time will be spent on the fundamentals of public speaking, which will include the composition and delivery of speeches. Methods of teaching English will be discussed in class. A weekly conference will be held with each student.

Daily, except Saturday, at 12.

MR. ILLINGWORTH

FRENCH

not
given
SS1. ELEMENTARY FRENCH. Foundation course for work in reading, writing, and speaking. Fraser and Squair's *Shorter*

Mr. Dodd states that this is as advanced and as suited
for and wait as #7

French Course will be used. The primary purpose of the course will be to develop the ability to read simple French, and the approach to the work will therefore stress knowledge of the *recognition* sort, limited to the understanding of exercises in French. Subsequently the earlier lessons of the book will be carefully reviewed, with emphasis on simple composition and oral exercises. Pronunciation will be emphasized from the start. *Daily, except Saturday, at 10.* MR. CHURCHMAN

SS2. INTERMEDIATE FRENCH. Reading, grammar review, oral work. Open to those who have had at least two years of high school French, or one year in college; others admitted as auditors. The work will begin with drill in pronunciation and a very rapid review of the exercises in French in the Fraser and Squair *Shorter French Course*. This will be followed by reading in the modern short story, training in understanding the spoken language, and a review of the elements of grammar and composition, with simple oral work. *Hour to be arranged.* MR. CHURCHMAN

*SS3. ADVANCED PRONUNCIATION OF FRENCH. Primarily for teachers, present or intending, but not limited to them. Assuming at least an elementary knowledge of the language, this course will proceed to make a careful study of the phonetic and orthographic principles which underlie a good pronunciation, touching somewhat upon the best ways of teaching the subject. Churchman and Hacker's *First Phonetic French Course*, with collateral reading of other works. *Hour to be arranged.* MR. CHURCHMAN

*SS4. AIMS AND METHODS OF TEACHING FRENCH, WITH INCIDENTAL ATTENTION TO SPANISH AND GERMAN. Primarily for teachers. Lectures, collateral reading, discussion. In addition to the broad question of aim and method, these topics (among others) will be discussed: the preparation of the teacher for his work, the teacher and his books (reading and reference), the teaching of pronunciation, examinations and the marking system, the practical administration of a course, realia and allied material (in the Clark Pedagogical Museum), the teaching of French literature. The reading will proceed from the older standard works to those more modern, including articles in journals. *Hour to be arranged.* MR. CHURCHMAN

SS5. RAPID SURVEY OF FRENCH LITERATURE. By means of the Vreeland-Michaud *Anthology of French Prose and Poetry* (Ginn) and G. L. Strachey's *Landmarks in French Literature*, (Holt), together with mimeographed material containing outlines of works read only in part, it will be possible to obtain a general idea of the literature as a whole and to read with profit selections from the most important authors. The time in the classroom will be devoted to discussion, and to reading in the original of significant material; there will be no translating. Collateral reading will be encouraged but not required. This course is open for credit only to those who are able and willing to read large amounts of fairly difficult French every day; others admitted as auditors.

Daily, except Saturday, at 11.

MR. CHURCHMAN

SPANISH

SS1. ELEMENTARY SPANISH. Foundation course for work in reading, writing, and speaking. Hills and Ford's *First Spanish Course*. In method and spirit this course will resemble French SS1, the description of which should be consulted for details.

Hour to be arranged.

MR. CHURCHMAN

NOTE. The combined offerings in French and Spanish will be limited to two courses, unless a large demand should justify an increase in the instructing force. An early indication of preference by prospective students will aid in the final selection from the courses listed.

GERMAN

SS1. ELEMENTARY GERMAN. Rapid survey of grammar essentials; writing of easy sentences to fix forms and the principles of syntax in the mind; reading of simple prose. A course designed especially for mature students who can give a very large share of their time during the session to this work. The right is reserved of withdrawing the course if elected by less than ten students.

Daily, except Saturday, at 10.

MRS. HODGE

SS2. GRAMMAR REVIEW AND READING OF GERMAN PROSE. This course is designed to meet the needs of students who have some knowledge of German and who wish to increase their

ability to read with accuracy and ease. The reading will be accompanied by a systematic review of the essentials of grammar, with much oral and some written practice. The works read will depend on the ability and needs of the members of the class. The right is reserved of withdrawing this course if elected by less than ten students.

Daily, except Saturday, at 9.

MRS. HODGE

Requests for application blanks, or for other information should be addressed to the

DIRECTOR OF THE SUMMER SCHOOL

CLARK UNIVERSITY

WORCESTER, MASS.

PRINTED AT
THE HEFFERNAN PRESS
SPENCER, MASS.

Chelmsville

Clark University Bulletin

Catalogue Number



Worcester, Massachusetts

February, 1924

Clark University Bulletin

NUMBER 28

FEBRUARY, 1924

Catalogue Number with Announcements for 1924-1925

The Catalogue is a record for the current academic year, 1923-24. Such announcements for the year 1924-25 as can be made at the time of publication are included.

All courses listed are given in 1923-24 and will be offered in 1924-25 unless a note to the contrary is appended to the announcement of the course.

The Bulletin is published in January, February, March, April, May, October, November, and December

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1923

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1924

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1925

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CALENDAR

1923			
SEPT.	19	Wednesday	Academic year began
OCT.	12	Friday	Columbus Day Recess
OCT.	13	Saturday	
NOV.	29	Thursday	Thanksgiving Recess
DEC.	1	Saturday	
DEC.	24	Monday	Christmas Recess
1924			
JAN.	1	Tuesday	Semester Examinations
JAN.	24	Thursday	
FEB.	1	Friday	Founder's Day*
FEB.	1	Friday	Second Semester begins
FEB.	4	Monday	Washington's Birthday
FEB.	22	Friday	Spring Recess
APR.	7	Monday	
APR.	12	Saturday	Patriots' Day
APR.	19	Saturday	Memorial Day
MAY	30	Friday	Semester Examinations
JUNE	3	Tuesday	
JUNE	11	Wednesday	Commencement Day
JUNE	16	Monday	Summer School
JULY	7	Monday	
AUG.	15	Friday	Academic Year begins
SEPT.	17	Wednesday	Columbus Day
OCT.	13	Monday	Thanksgiving Recess
NOV.	27	Thursday	
NOV.	29	Saturday	Christmas Recess
DEC.	24	Wednesday	
1925			
JAN.	1	Thursday	Semester Examinations
JAN.	22	Thursday	
JAN.	30	Friday	Founder's Day*
FEB.	2	Monday	Second Semester begins
FEB.	23	Monday	Washington's Birthday
APR.	6	Monday	Spring Recess
APR.	11	Saturday	
APR.	20	Monday	Patriot's Day
MAY	30	Saturday	Memorial Day
JUNE	2	Tuesday	Semester Examinations
JUNE	10	Wednesday	
JUNE	15	Monday	Commencement Day

*Not a holiday

BOARD OF TRUSTEES

A. GEORGE BULLOCK (1901)	Worcester, Mass.
FRANCIS H. DEWEY (1904), Vice-President and Treasurer	Worcester, Mass.
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CHARLES H. THURBER (1913), President	Boston, Mass.
ALFRED AIKEN (1919)	Worcester, Mass.
GEORGE H. MIRICK (1920), Secretary	Worcester, Mass.
STEDMAN BUTTRICK (1920)	Concord, Mass.

FINANCE COMMITTEE

A. GEORGE BULLOCK
 FRANCIS H. DEWEY
 CHARLES H. THURBER

Final authority in all matters pertaining to the University is lodged in the Board of Trustees by charter granted by the General Court of the Commonwealth of Massachusetts.

ADMINISTRATIVE OFFICERS

President of the University and Director of the Graduate School of Geography	W. W. ATWOOD
Librarian and Curator of the Art Collection	L. N. WILSON
Dean of the College	H. P. LITTLE
Director of the Summer School	C. B. RANDOLPH
Director of the Home Study Department	D. C. RIDGLEY
Registrar and Secretary of the Graduate Board	C. E. MELVILLE
Bursar	FLORENCE CHANDLER

Officers of Administration and Instruction

WALLACE WALTER ATWOOD, PH.D. 160 Woodland St.

President, 1920-. Professor of Physical and Regional Geography. Director of the Graduate School of Geography.

B.S., University of Chicago, 1897; Fellow, Assistant, and Associate, 1899-1903; Ph.D., 1903; Instructor and Assistant Professor of Physiography and General Geology, 1903-10; Associate Professor, 1910-13. Instructor, Lewis Institute, Chicago, 1897-99. Instructor, Chicago Institute, 1900-01. Professor of Physiography, Harvard University, 1913-20. Geologist, U. S. Geological Survey. Fellow, American Academy of Arts and Sciences. Member, Geological Society of America and the Association of American Geographers. President, National Council of Geography Teachers, 1920-21.

GRANVILLE STANLEY HALL, PH.D., LL.D. 156 Woodland St.

President of the Graduate Division of the University and Professor of Psychology, 1888-1920. Professor Emeritus.

WILLIAM EDWARD STORY, PH.D. 17 Hammond St.

Professor of Mathematics, 1889-1921. Professor Emeritus.

LOUIS N. WILSON, LITT.D. 11 Shirley St.

Librarian, 1889-. Custodian of the Art Collection. Litt.D., Tufts College, 1905.

EDMUND CLARK SANFORD, PH.D., Sc.D., LL.D. 24 Loudon St.

Professor of Psychology and Education.

Instructor in Psychology, 1889-92; Assistant Professor, 1892-1900; Professor of Experimental and Comparative Psychology, 1900-09; Lecturer on College Administration, 1909-20; Professor of Psychology and Education, 1920-.

Professor of Psychology, Clark College, 1903-07; President, 1909-20.

A. B., University of California, 1883; LL.D., 1912. Fellow in Psychology, Johns Hopkins University, 1887; Ph.D., 1888; Instructor, 1888-89; Fellow by courtesy, 1920-21. Sc.D., Hobart College, 1909.

HENRY TABER, PH.D. 2 Pleasant Pl.
Professor of Mathematics, 1903-21. Professor Emeritus.

WILLIAM HENRY BURNHAM, PH.D. 767 Main St.
Professor of Education and School Hygiene.

Docent in Pedagogy, 1890-92; Instructor, 1892-1900; Assistant Professor, 1900-06; Professor, 1906.

A. B., Harvard University, 1882. Instructor in Wittenberg College, 1882-83. Instructor, State Normal School, Potsdam, N. Y., 1883-85. Fellow, Johns Hopkins University, 1885-86; Ph.D., 1888; Instructor in Psychology, 1888-89.

BENJAMIN SHORES MERIGOLD, PH.D. 166 Woodland St.
Professor of Chemistry.

Instructor in Chemistry, 1905-12, 1916-20; Professor, 1920.

Assistant Professor of Chemistry, Clark College, 1903-08; Professor, 1908-20.

A.B., Harvard University, 1896; Assistant in Chemistry, 1896-1900; A.M., 1897; Ph.D., 1901. Instructor in Chemistry, Worcester Polytechnic Institute, 1900-03.

FRANK BLAIR WILLIAMS, PH.D. 24 Loudon St.
Professor of Mathematics.

Scholar in Mathematics, 1897-98; Fellow, 1898-1900; Ph.D., 1900; Instructor, 1910-1920; Professor, 1920.

Assistant Professor of Mathematics, Clark College, 1907-08; Professor, 1908-20.

C.E., University of Missouri, 1890; M.S., 1893; Teaching Fellow, 1892-93. Engineering Work, United States Government Surveys, 1890-92 and 1894; Assistant Engineer, 1895-97. Assistant Professor of Engineering, Union College, 1900-04; Professor of Engineering Mathematics, 1904-07.

GEORGE HUBBARD BLAKESLEE, PH.D., L.H.D. 21 Downing St.
Professor of History and International Relations.

Instructor in History, 1905-11; Professor, 1911.

Instructor, Clark College, 1903-04; Assistant Professor, 1904-09; Professor, 1909-20.

A.B., Wesleyan University, 1893; L.H.D., 1923. Student, Johns Hopkins University, 1893-94. Graduate Student, Harvard University, 1898-1901; A.M., 1900; Parker Fellow, 1901-02; Ph.D., 1903. Universities of Berlin, Leipzig, and Oxford, 1901-03. Member of the Commission of Inquiry to prepare data for the United States Delegation to the Peace Conference, 1918-19. Member of the Council of the American Antiquarian Society. Member of Technical Staff, American Delegation, Conference on Limitation of Armament, Washington, 1921-22.

CHARLES BREWSTER RANDOLPH, PH.D. 10 Otsego Rd.
Professor of German, 1920-. Director of the Summer School.

Instructor in Greek, Clark College, 1903-04; Instructor in Greek and Latin, 1904-05; Assistant Professor, 1905-10; Professor of Latin, 1910-18; Professor of Latin and German, 1918-20.

A.B., Wabash College, 1896; Tutor in Classics, 1896-97. Graduate Student, Harvard University, 1901-03; A.M., 1902; Ph.D., 1905. Instructor in Greek and Latin, University of Illinois Preparatory School, 1897-1900. Student, University of Halle, 1900-01.

PHILIP HUDSON CHURCHMAN, PH.D. 20 Institute Rd.
Professor of Romance Languages, 1920-.

Assistant Professor of Romance Languages, Clark College, 1908-11; Professor, 1911-20.

A.B., Princeton University, 1896; A.M., 1903; Instructor in French, 1900-04. Master, Chestnut Hill Academy, Philadelphia, 1897-99. Student, Universities of Paris and Grenoble, 1899-1900. Student, University of Paris, 1903-04. Instructor in French and Spanish, United States Naval Academy, 1904-05. Graduate Student, Harvard University, 1905-08; Instructor in Romance Languages, 1906-08; Ph.D., 1908. Visiting Lecturer in the University of Chicago, Summer Quarter, 1912.

HAVEN DARLING BRACKETT, PH.D. 114 Woodland St.
Professor of the Greek and Latin Languages and Literatures, 1920-.

Instructor in Greek and Latin, Clark College, 1904-06; Assistant Professor, 1906-10; Assistant Professor of Greek, 1910-12; Professor of Greek, 1912-15; Professor of the Greek Language and Literature, 1915-20.

A.B., Amherst College, 1898. Master in Greek, Mercersburg Academy (Pennsylvania), 1898-99. Master in Greek, Lake Forest Academy (Illinois), 1899-1900. Sub-master, Boston Latin School, 1900-01. Graduate Student, Harvard University, 1901-04; Ph.D.,

1904; Assistant in Ancient History, Harvard University, and Lecturer in Greek History, Radcliffe College, 1903-04.

CHARLES A. KRAUS, PH.D. 11 Downing St.
Professor of Chemistry and Director of the Chemical Research Laboratories, 1914-.

B.S., University of Kansas, 1898. Fellow in Physics, Johns Hopkins University, 1899-1900. Instructor in Physics, University of California, 1901-04. Research Assistant, Massachusetts Institute of Technology, 1904-08; Ph.D., 1908; Research Associate, 1908-12; Assistant Professor of Physical Chemical Research, 1912-14.

LEROY ALLSTON AMES, A. M. 166 Woodland St.
Professor of English Literature, 1920-.

Instructor in English Literature, Clark College, 1908-10; Assistant Professor, 1910-15; Professor, 1915-20.

A.B., Harvard University, 1896; Assistant in English 1899-1900; Graduate Student, 1899-1901; A.M., 1901. Teacher of English, Browne and Nichols School, Cambridge, Mass., 1896-99; Worcester English High School, 1901-06; Noble and Greenough School, Boston, Mass., 1906-07.

LORING HOLMES DODD, PH.D. 20 Sagamore Rd.
Professor of Rhetoric, 1920-.

Instructor in English, Clark College, 1910-13; Assistant Professor, 1913-16; Associate Professor, 1916-20.

A.B., Dartmouth College, 1900. A.M., Columbia University, 1901. Ph.D., Yale University, 1907. Instructor, Choate School, Wallingford, Conn., 1901-02. Instructor in English, St. Paul's School, Garden City, N. Y., 1907-10.

ROBERT HUTCHINS GODDARD, PH.D. 5 Bishop Av.
Professor of Physics.

Student in Physics, 1908-09; Fellow, 1909-11; A.M., 1910; Ph.D., 1911; Honorary Fellow, 1911-12, 1914-15, 1919-20; Instructor in Physics, 1916-18; Professor and Associate Director of Physical Laboratories, 1920-23.

Instructor in Physics, Clark College, 1914-15; Assistant Professor, 1915-19; Associate Professor, 1919-20.

B.S., Worcester Polytechnic Institute, 1908; Instructor in Physics, 1908-09. Research Instructor in Physics, Princeton University, 1912-13. Director of Research under U. S. Signal Corps, Worcester Polytechnic Institute and Mt. Wilson Observatory, 1918.

GEORGE FREDERIC WHITE, PH.D.

38 Somerset St.

Professor of Organic Chemistry.

Docent in Biological Chemistry, 1913-15; Instructor, 1915-20; Associate Professor of Organic Chemistry, 1920-21; Professor, 1921.

Instructor in Organic Chemistry, Clark College, 1912-13; Assistant Professor, 1913-18; Associate Professor, 1918-20.

S.B., Massachusetts Institute of Technology, 1906; Assistant in Analytical and Organic Chemistry, 1906-08. Fellow, Johns Hopkins University, 1909-10; Ph.D., 1910. Associate Professor of Chemistry, Richmond College, 1910-12.

HOMER PAYSON LITTLE, PH.D.

6 Woodbine St.

Professor of Geology, 1922-. Dean of the College.

A.B., Williams College, 1906. Fellow, Johns Hopkins University, 1909-10; Ph.D., 1910. Instructor and later Professor of Geology, Colby College, 1910-20. Lecturer in Geology, Bangor Theological Seminary, 1913, 1916, 1919. U. S. Geological Survey, 1907. Maryland Geological Survey, 1908-10. Instructor, Johns Hopkins Summer School, 1921. Executive Secretary, Division of Geology and Geography of the National Research Council, 1920-22.

SAMUEL J. BRANDENBURG.

166 Woodland St.

Professor of Economics and Sociology, 1923-.

A.B., Miami University, 1904. Graduate Student, University of Illinois, 1908-09, and University of Chicago, 1905-09; Ph.M., University of Chicago, 1909. Professor of Economics, and Librarian, Miami University, 1909-20. Graduate Student and Assistant, University of Wisconsin, 1920-22; Ph.D., 1922. Professor of Economics and Sociology, University of Arkansas, 1922-23. Visiting Lecturer in Economics, University of Texas, Summer, 1923.

ALFRED LEWIS PINNEO DENNIS, PH.D.

112 Woodland St.

Professor of Modern History.

Acting Professor of International Relations, Second Semester, 1922-23; Professor of Modern History, 1923.

A.B., Princeton, 1896. Student, Columbia, Heidelberg, and Harvard Universities, 1896-1901. Ph.D., Columbia University, 1901. Instructor and Professor of History and Political Science, Bowdoin College, 1901-04. Associate Professor of History, University of Chicago, 1904-05. Lecturer in History, Harvard University, 1905-06. Professor of History, University of Wisconsin, 1906-20.

Captain, Military Intelligence Division, General Staff, 1918-19. Assistant Military Attaché, American Embassy, London, reporting to Peace Conference, Paris, 1919. Awarded British Military Cross.

CARL MURCHISON, PH.D.

9 Shirley St.

Professor of Psychology, 1923-.

A.B., Wake Forest College, 1909. Rumrill Fellow, Harvard University, 1909-10. Student, Rochester Theological Seminary, 1910-13. Student, Yale University, 1914 (Jan.)-16. Assistant Professor of Psychology, Miami University, 1916-19; on leave, 1917-19, 1922-23; Associate Professor, 1919-23. Instructor, Army School for Military Psychology, Camp Greenleaf, Georgia, 1918. Psychological Examiner and Camp Morale Officer, Camp Sherman, Ohio; Assistant, 1918-19; Chief, 1919. Johnstone Scholar, Johns Hopkins University, 1922-23; Ph.D., 1923.

ELLEN CHURCHILL SEMPLE, A.M., LL.D.

941 Main St.

Professor of Anthropogeography, 1922.

Professorial Lecturer in Anthropogeography, 1921-22.

A.B., Vassar College, 1882; A. M., 1891. LL.D., University of Kentucky, 1923. Student, Leipzig University, 1891-92, 1895. Lecturer, University of Chicago between 1906-1923. Lecturer at School of Geography, Oxford University, England, summer terms 1912, and 1922. Ex-President, Association of American Geographers. Gold Medalist of American Geographical Society.

OLIVER EDWIN BAKER, PH.D.

Acting Professor of Agricultural Geography.

Professorial Lecturer in Agricultural Geography, second semester, 1922-23; Acting Professor of Agricultural Geography, 1923-.

B.Sc., Heidelberg (Ohio) University, 1903; M.S., 1904. M.A. Columbia University, 1905. Student, Yale University, 1907-08. Wisconsin Agricultural Experiment Station, 1910-12. Agricultural Economist, Bureau of Farm Management and Farm Economics, U. S. Department of Agriculture, 1912. Ph.D., University of Wisconsin, 1921.

CAREY EYSTER MELVILLE, A. B.

16 Isabella St.

Associate Professor of Mathematics. Registrar. Secretary of the Graduate Board.

Honorary Fellow in Mathematics, 1906-15; Associate Professor, 1920; University Registrar and Secretary of the Graduate Board, 1922-.

Assistant in Mathematics, Clark College, 1906-09; Instructor, 1909-10; Instructor in Mathematics and Physics, 1910-11; Assistant Professor, 1911-14; Assistant Professor of Mathematics, 1914-18; Associate Professor, 1918-20; Registrar, 1914-22.

A.B., Northwestern University, 1901. Instructor in Mathematics, Academy of Northwestern University, 1901-02. Graduate Student, Johns Hopkins University, 1902-03. Instructor in Mathematics, Case School of Applied Science, 1903-06.

CHARLES FRANKLIN BROOKS, PH.D. 209 Lovell St.
Associate Professor of Meteorology and Climatology,
1921-.

A.B., Harvard University, 1911; A.M., 1912. Research Assistant, Blue Hill Observatory, 1912-13; Assistant in Meteorology and Physical Geography, 1913-14; Ph.D., 1914. Assistant and Collaborator in Farm Management, United States Department of Agriculture, 1914-18. Instructor in Geography, Yale University, 1915-18. Instructor in Meteorology, United States Signal Service, 1918. Meteorologist, United States Weather Bureau, 1918-21. Secretary (1919-) and Treasurer (1921-23), American Meteorological Society. Fellow, Royal Meteorological Society. Member, Association of American Geographers.

KENNETH STILLMAN RICE, SC.M. 3 Hawthorn St.
Assistant Professor of Biology.

Honorary Fellow in Biology, 1919-20; Assistant Professor, 1920-. Assistant Professor of Biology, Clark College, 1919-20.

Ph.B., Brown University, 1913; Sc.M., 1915; Graduate Student in Physiology, 1915-17. Scientific Assistant, U. S. Bureau of Fisheries Laboratory, Woods Hole, Mass., Summers of 1915 and 1916. Instructor in Physiology, Medical School of the University of Georgia, 1917-18. Instructor in Biology, Tufts Pre-medical School, 1918-19.

CLARENCE FIELDEN JONES, PH.D. 193 Lovell St.
Assistant Professor of Economic and Commercial Geography, 1923-.

B.S., University of Chicago, 1917; Assistant and Graduate Student, Department of Geography, 1919-23; Ph.D., 1923. Head of Department of Geography, State Normal School, St. Cloud, Minn., 1917-18. Instructor in Geography, Illinois State Normal University, Summer Session, 1920.

WILLIAM LEONARD LANGER, PH.D. 556 Chandler St.
Assistant Professor of European History, 1923-.

A.B., Harvard College, 1915; Graduate Student, 1919-23; Assistant in History, 1919-21; A.M., 1920; Bayard Cutting Travelling

Fellow, 1921-22; Instructor in History, 1922-23; Ph.D., 1923. Instructor in Modern Languages, Worcester Academy, 1915-17. Graduate Student, Clark University, 1917. Student, University of Vienna, 1921-22.

HARRY EDWARD MILLER, Ph.D. 166 Woodland St.

Assistant Professor in Economics, 1923-.

A.B., Boston University, 1919. Graduate Student, Harvard University, 1919-23; A.M., 1920; Assistant in Economics, 1921-23; Ph.D., 1923.

ASA ARTHUR SCHAEFFER, Ph.D. 162 May St.

Assistant Professor of Biology, 1923-.

A.B., Franklin and Marshall College, 1904. Fellow in Zoölogy, Johns Hopkins University, 1908-09; Ph.D., 1909. Instructor and later Professor of Zoölogy, University of Tennessee, 1909-1923; Head of Department of Zoölogy, 1916-23. Instructor, Biological Laboratory of the Brooklyn Institute of Arts and Sciences, Cold Spring Harbor, N. Y., 1908-1916. Associate Investigator, Department of Marine Biology, Carnegie Institution of Washington, 1919-. Associate Editor, Journal of Morphology.

PERCY MARTIN ROOPE, A. B. 15 Shirley St.

Instructor in Physics, 1921-.

A.B., Clark College, 1920.

Instructor in Physics, Kalamazoo College, 1920-21.

EARL GODFREY MELLOR, A.B. 202 May St.

Instructor in Romance Languages, 1922-.

A.B., Clark College, 1918.

U. S. Ambulance Corps, 1918-19. Instructor, Blair Academy, 1919-21. Student, University of Paris; and Instructor, Ecole du Château, Soisy sous Etoilles, Seine et Oise, France, 1921-22.

JOSEPH DE PEROTT 5 Hawthorn St.

Lecturer in Mathematics. (Emeritus.)

DOUGLAS CLAY RIDGLEY, M.S. 166 Woodland St.

Special Lecturer in Geography.

Lecturer in Geography, 1922-23; Special Lecturer, 1923-.

A.B., Indiana University, 1893. High School Instructor and Principal, Chicago Schools, 1895-1903. Professor of Geography and Head of Department of Geography, Illinois State Normal University, 1903-1922; on leave, 1921-22. Graduate Student, University of Chicago, 1921-22; M.S., 1922.

ERNEST RAYMOND WHITMAN	1 Webster St.
Director of Physical Education.	
FREDERICK HERBERT BAKER, M. D., (Harvard)	4 Linden St.
Medical Director.	
FLORENCE CHANDLER	938 Main St.
Bursar.	
J. EDWARD BOUVIER	22 Lenox St.
Musical Director.	
EUGENE C. BELKNAP	9½ Hancock St.
Curator, Department of Chemistry.	
FRANK G. ARMITAGE	166 Woodland St.
Extra-mural Representative.	
JOHN W. BOARDMAN	15 Shirley St.
Superintendent of Buildings and Grounds	

ASSISTANTS

KENNETH SMITH BUXTON, Chemistry.	
CHARLES ALEXIUS DICKINSON, Psychology.	
FLOYD REED EASTWOOD, Physical Education.	
WILLARD N. GREER, Chemistry.	
TAICHI HARADA, Chemistry.	
DONALD ELLWOOD HIGGINS, Physics.	
PALMER PECKHAM HOWARD, History and International Relations.	
ERNEST WILLIAM JOHNSON, Chemistry.	
WARREN CHARLES JOHNSON, Chemistry.	
HAROLD AUGUSTUS MOUNTAIN, History and International Relations.	
HENRY HARRISON RUSSELL, Physical Education.	
EVERETT JOSEPH SLATE, JR., Economics and Sociology.	
STANWOOD BARTLETT EUGENE TOWNE, Chemistry.	

COMMITTEES OF THE FACULTY

ON THE DEGREE OF BACHELOR OF EDUCATION: The Director of the Summer School, the Dean of the College, the Registrar and the Director of the Home Study Department.

ON THE SUMMER SCHOOL: Messrs. Randolph, Blakeslee, Melville and Ridgley.

ON THE CATALOGUE: Messrs. White, Little and Melville.

ON PERSONNEL AND ORGANIZATION: Messrs. Blakeslee, Churchman, Little, Melville, Randolph and Sanford.

UNIVERSITY SENATE

(1923-24)

President Wallace W. Atwood, *Chairman*

George H. Blakeslee

Homer P. Little

Samuel J. Brandenburg

Benjamin S. Merigold

William H. Burnham

Charles B. Randolph

Alfred L. P. Dennis

Edmund C. Sanford

Robert H. Goddard

Louis N. Wilson

The University

General Information

Clark University is located in Worcester Massachusetts, an industrial and educational center with a population of nearly two hundred thousand. It is distant about forty miles from Boston and from Providence, and about two hundred miles from New York City.

Situated at the eastern border of the Central Massachusetts upland at an altitude of nearly six hundred feet above sea level, excessive humidity is seldom experienced and the climate is bracing.

The University owes its existence to the interest in higher education of Jonas Gilman Clark, who was born at Hubbardston, Worcester County, Massachusetts, February 1, 1815. Conscious of the meagerness of his own early educational opportunities, he devoted his later years to the establishment and nurture of the institution which bears his name. In this he was ably assisted by his wife, Susan W. Clark, and by prominent citizens of Worcester. Mr. Clark died at Worcester on May 23, 1900.

The charter of the University was granted by the General Court of Massachusetts in 1887. The Graduate Division, with Granville Stanley Hall as president, received its first students in 1889. Special provision was made in Mr. Clark's will for the establishment of a collegiate Undergraduate Division with its own president but under the same general control as the Graduate Division. Carroll Davidson Wright was chosen president of the Undergraduate Division and students were first received in October 1902. After the death of President Wright in 1909, Edmund Clark Sanford, then Professor of Psychology in the Graduate Division, was chosen as his successor.

In June 1920, following the resignation of President Hall after thirty-two years of service in the Graduate Division and of President Sanford of the College, the Trustees announced the election of Wallace Walter Atwood to the presidency of both the Graduate and the Undergraduate Divisions of the University.

During the academic year 1920-21 the two faculties continued their separate organizations while plans for unification were being worked out. These plans, approved by the Board of Trustees, went into effect in 1921-22 and provided for the fusion of the two faculties into a single body.

With the reorganization of the University, provision was made for the establishment of a Graduate School of Geography, and in the fall of 1921 work in that school was begun with President Atwood as Director.

A Summer School with a six weeks' session has been conducted each year, beginning in 1921.

The University Campus is a tract of about eight acres bounded by Main, Woodland, Maywood, and Downing Streets, about a mile and a quarter from the City Hall. Here the principal buildings are located. Besides this tract, the institution owns the athletic grounds between Maywood and Beaver Streets, the land on the corner of Woodland and Charlotte Streets, where the Dining Hall is located and the Hadwen Arboretum, the bequest of Mr. O. B. Hadwen, a tract of about twenty acres situated on Lovell and May Streets.

The Main Building, completed in 1889, is a four story granite and brick building, 204 feet by 114 feet, of fire resisting construction, containing about ninety rooms.

The Science Building, completed in 1889, is constructed of brick with brick partitions throughout. It has the form of a letter L with each wing about 135 feet in length. The wing adjacent to Woodland Street, containing about twenty-eight rooms on three floors, is occupied by the Department of Chemistry. The other wing, containing about twenty-two rooms on four floors, is occupied by the Department of Physics.

The Library Building, completed in 1903, is architecturally the most noteworthy of the University buildings. The design is a modern adaptation of the Gothic style. The exterior is of brick on a granite foundation. The interior is finished throughout in oak. The building, facing Main Street and extending back along Downing Street, is 78 feet by 168 feet and three stories in height.

The Geography Building, completed in 1910, is 56 feet wide and extends along Main Street for 111 feet. It is connected by corridors to the Library Building, which it matches in design.

The Dining Hall was completed in 1908. It is about 43 feet wide by 123 feet long, one story high, with a basement mostly above ground, and is built of brick. The equipment is modern in every respect, and ample for the accommodation of about two hundred regular boarders.

The University also owns the residences on Woodland Street occupied by President Atwood and by Professor Emeritus Hall, a residence used as a dormitory, and several other dwellings, including two at the Hadwen Arboretum.

ORGANIZATION

The University includes:

The Undergraduate Division offering a general collegiate course leading to the B. A. Degree.

The Graduate Division offering advanced instruction leading to the A. M. and Ph. D. degrees.

The Graduate School of Geography, offering special training leading to higher degrees in Geography and related subjects.

The Summer School, offering both undergraduate and graduate instruction with special reference to candidates for the B.Ed. degree.

The Library with its separate endowment, offering unusual opportunities for study and research.

The courses of study offered are distributed among fourteen departments:

1. Ancient Languages and Literatures
2. Biology
3. Chemistry
4. Economics and Sociology
5. Education and School Hygiene
6. English Language and Literature
7. Geography
8. Geology
9. German Language and Literature
10. History and International Relations

11. Mathematics
12. Physics
13. Psychology
14. Romance Languages and Literatures

Announcements of the different divisions and of the different departments will be found, each under its own heading, in the following pages.

THE BOARD OF TRUSTEES is the ultimate authority in all matters pertaining to the University.

THE PRESIDENT is the executive officer of the institution.

THE FACULTY consists of the President, the Librarian, and all members of the staff giving regular courses of instruction. It has immediate supervision over the general educational work of the University and is responsible for the nomination to the Board of Trustees of candidates for baccalaureate degrees and for honorary degrees.

THE SENATE is an advisory body consisting of not less than six members of the Faculty, appointed by the President.

THE GRADUATE BOARD consists of the President and representatives of the departments offering advanced graduate instruction. It has general control of the work of the Graduate Division of the University and is responsible for the nomination to the Board of Trustees of candidates for the degrees of Master of Arts and of Doctor of Philosophy.

THE COLLEGIATE BOARD consists of the President, the Dean of the College, the Registrar of the College and six members of the Faculty appointed by the President. It has immediate supervision over the work of the Undergraduate Division subject to the direction of the Faculty and recommends to the Faculty candidates for the baccalaureate degrees.

THE ACADEMIC YEAR

The University begins on the Wednesday before the third Thursday in September, and Commencement Day is the third Monday in June. The first semester ends on the Saturday before the twentieth Monday, and the second semester begins on the twentieth Monday of the academic year. There are three recesses during the college year: Thanksgiving Day and the two days

following; eight to ten days including Christmas and New Year's Days; and the week beginning with the first Monday in April. University exercises are suspended also on Columbus Day, Washington's Birthday, Patriots' Day, and Memorial Day, and during some of the morning hours on Founder's Day, in order to permit students to attend the commemoration exercises.

The Summer School begins on the Monday following July 4, and continues in session for six weeks.

Students are expected to be present on the first day of each term and to continue in attendance from day to day to the end of the term.

ADMISSION

Three classes of students are admitted:

1. Undergraduates. For requirements see page 34.
2. Graduate students. For requirements see page 45.
3. Special students. (a) Mature persons, not candidates for a degree, who wish to take advantage of the opportunities for study afforded by the University, and who give satisfactory evidence of adequate preparation for the work which they wish to undertake. (b) Students who are candidates for the B.Ed. degree. For requirements see page 71.

Requests for information and for application forms should be addressed to the Registrar.

REGISTRATION

Registration of programs of study takes place on or before the opening day of the academic year, and, when there is any change of program for the second semester, on or before the first day of the semester.

Registration for the Summer School takes place on the first day of the session.

TUITION AND FEES

The tuition in the Undergraduate and Graduate Divisions is \$100* per year, payable in two equal installments. These installments are due at the beginning of each semester. If the tuition is not paid within ten days after it is due the enrollment of the *\$150, beginning with the academic year 1924-25.

student lapses. A student whose enrollment has lapsed for non-payment of tuition may be re-enrolled, with permission of the proper administrative officer, on payment of the overdue tuition with an additional fee of \$2.

Teachers and others carrying small programs are charged at the rate of \$20 for a course meeting once weekly through the year, and \$10 for each additional hour per week through the year.

Tuition in the Summer School is \$20 for a single course and \$35 for two or more courses. Tuition may be paid at any time before the opening of the Summer School, and must be paid by noon of the first Saturday of the term.

A matriculation fee of \$5 is required of all students entering Clark University. This is paid but once, and permits a student to return successive years, or after a period of absence, without any further charge for matriculation. This fee applies also to students who register for the Summer School.

Laboratory fees are charged according to the following schedule:

\$2.50 each semester for undergraduate laboratory courses in Biology, Geology, Physics, Psychology, and Chemistry.

A deposit of \$10 for each course, to cover breakage, is required of students taking undergraduate laboratory work in Chemistry. Any balance remaining at the end of the year is returned on application; and if the deposit is not sufficient to cover breakage, any excess is collected by the Bursar.

A deposit of \$25 is required of each graduate student in the Department of Chemistry, at the beginning of the year. Ordinary supplies and materials are charged to the student's account at cost. Any balance remaining is refunded at the end of the year.

Laboratory fees and deposits for breakage are due at the time of registration for the courses.

Diploma fees are charged according to the following schedule:

\$5 for the Bachelor of Arts diploma.

\$5 for the Bachelor of Education diploma.

\$10 for the Master of Arts diploma.

\$25 for the Doctor of Philosophy diploma.

These fees are due before the delivery of the diploma.

OTHER EXPENSES

Board at the Dining Hall is furnished at cost and the charge has varied from year to year. During the current year the charge has been \$7 per week.

Undergraduates who do not live in their own homes are required to board at the Dining Hall.

The University has dormitory accommodations for a small number of male graduate students only. Lodging can be secured within convenient distances at a cost for furnished room as low as \$2.50 per week.

The cost of books varies greatly with the programs of study and no definite estimate of this item of expense can be given. The University maintains a book store which is operated without profit in order to reduce the cost of text-books and supplies.

HEALTH AND PHYSICAL TRAINING

The Medical Director, Doctor Frederick H. Baker, exercises general supervision over matters of health and hygiene in the University. For undergraduates a thorough medical examination is required at the beginning and end of each year. Three hours per week of Physical Training are required of all who are not excused for adequate reasons. Medical examinations and Physical Training are optional with graduate students.

The Medical Director is available during the academic year for conferences and medical advice. It is intended that his services shall be primarily of a preventive nature. The University does not conduct an infirmary and does not undertake to care for cases of illness requiring medical attention or hospital accommodations, although it will cooperate in every possible way in meeting such emergencies.

The Director of Physical Education has supervision over all required Physical Training and other athletic activities. In the matter of intercollegiate contests he is assisted by the Committee on Athletics of the Faculty.

The University athletic grounds lie on the opposite side of Maywood Street from the campus. The tennis courts here are among the best in the city; there is a fine cinder running track

about an eighth of a mile in length, and ample provision has been made for the practice of all sorts of track athletics.

The gymnasium is located on the ground floor of the Main Building. Individual steel lockers and an ample number of shower baths are provided.

PUBLIC LECTURES

Several series of public lectures, by competent speakers both from within and without the University, are given during the year. The weekly General Assembly of the students is frequently addressed by invited speakers from outside. On these occasions members of the University hear many men and women of national and international reputation.

The Library

LOUIS N. WILSON, *Librarian*

EDITH M. BAKER, *Assistant Librarian*, HELEN J. ELLIOT,
Cataloguer, LUCILLE J. LITTLEFIELD, RUTH PROCTOR,

EDITH L. SAWYER, LOUISA J. STANFORD, *Assistants*

JOHN J. TOOMEY, EDMUND B. TOWNE, *Student Assistants*

The Library under the terms of Mr. Clark's will received one quarter of his estate for the "support and maintenance of a University Library." Thus the Library is well endowed and is able to provide amply for the needs of all departments.

The Library is situated on the corner of Main and Downing Streets. A full description of the building and of the Proceedings at the Public Opening which was held January 14, 1904, will be found in the Publications of the Clark University Library for April 1904 (Vol. 1, No. 3).

The Library contains over 105,000 bound volumes and pamphlets, and the reading room receives over 500 journals.

The books are grouped as follows:

A Works of General Reference	L Biography
B Journals	M Anthropology
C Mathematics	N Education
CD Mathematics-Physics	O General Science
D Physics	P History
DE Physical Chemistry	R Political and Social Science
E Chemistry	Economics
F Biology, Zoölogy, Botany, Physiology, Neurology.	S English
G Geography	T Modern Languages
H Pathology	U Classics
I Psychology	W Practical Arts
J Philosophy	X Library Science
K Religious Psychology	Y Art
	Z European War

Tuesday and Friday mornings, each week, all books recently added to the Library are placed upon a table in the reference section where they remain for three days. This affords the members of the University an opportunity to examine the new books in all

departments before they are placed upon the shelves for circulation.

Particular attention is paid to the needs of students engaged in research work. The Library already possesses a good collection of complete sets of the best scientific periodicals. It makes liberal purchases for individual needs and supplements these by drawing upon the resources of the older and larger libraries through the inter-library loan system. The number of books added each year is about four thousand volumes.

The books in the Art Department are accessible on application to the Librarian, but, by the terms of the Founder's will, they cannot be taken from the building.

All the privileges of the Library are open to all members of the University, and each member has direct access to every book and journal.

The Library is open from 8 a. m. to 10 p. m. each week day, except on legal holidays, during term time and during the Summer School session.

ART DEPARTMENT

In his last will and testament the Founder of the University bequeathed

"the sum of \$100,000, as an endowment fund for the Art Department of said University, and said sum is to be held and kept sacred and intact as a principal not to be used or expended under any conditions; but the income, interest or proceeds thereof shall be used only in putting and keeping said works of art or others given or obtained for said department in good condition and in taking care of them; and then if there is a surplus of the income of said fund left, I will and direct that it be used in the purchase of additional works of art or of such matters as will add to the usefulness and efficiency of said Art Department."

Under these conditions a large room has been furnished and equipped on the upper floor of the Library Building. Upon the death of Mrs. Clark, those of the Founder's collections that were deemed most suitable for this purpose were arranged and displayed in this room, together with his most valuable books, which, by the conditions of the will, cannot be removed from the building. A complete catalogue of these books and paintings has been published in the Publications of the Library, Vol. 2, No. 1.

The Art Department is open daily (except Sundays and holidays) from 9 a. m. to 5 p. m.

Four portraits and one landscape painting have been added to the collection:

1909. Portrait of the late Carroll D. Wright, president of Clark College from 1903 to 1909, by the late Frederick Vinton of Boston.

This painting was awarded the Temple Gold Medal at the 1909 Exhibition of the Pennsylvania Academy of Fine Arts.

1911. Portrait of G. Stanley Hall, president of Clark University from 1888 to 1920, by the late Frederick P. Vinton of Boston.

1913. Landscape painting, "Snowing," by Joseph H. Greenwood of Worcester.

1914. Portrait of Edmund C. Sanford, president of Clark College from 1909 to 1920, by Joseph De Camp of Boston.

1921. Portrait of Augustus George Bullock, member of the Board of Trustees since 1901 and president of the Board from 1905 to 1919, by Leslie P. Thompson of Boston.

To commemorate the twenty-fifth anniversary of the University the Board of Trustees, early in 1914, commissioned Mr. Victor D. Brenner of New York to prepare a medal to mark that event. The medal is made of bronze and is three inches in diameter. On the obverse is delineated the head of President G. Stanley Hall, and on the reverse a beautiful allegorical group symbolizing the spirit of the University and the legend,

"Knowledge is proud that he has learned so much,
Wisdom is humble that he knows no more."

Scale models of the buildings and the University grounds have been made by T. J. McAuliffe and Son of Worcester, under the direction of the architects, Messrs. Frost and Chamberlain.

The Undergraduate Division (Clark College)

COLLEGIATE BOARD

THE PRESIDENT OF THE UNIVERSITY

THE DEAN OF THE COLLEGE

THE REGISTRAR OF THE COLLEGE

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HAVEN D. BRACKETT

PHILIP H. CHURCHMAN

ROBERT H. GODDARD

BENJAMIN S. MERIGOLD, SECRETARY

KENNETH S. RICE

STANDING COMMITTEES OF THE COLLEGIATE BOARD

The President and the Dean are *ex officio* members of all committees.

ON ADMISSIONS: The Registrar, Messrs. Goddard and Brackett.

ON STUDENTS' STANDING: The Registrar, and the Instructors and Advisers of the Students under consideration.

ON CURRICULUM: The Registrar, Messrs. Ames and Churchman.

ON STUDENTS' FINANCES: Messrs. Randolph, White and Williams.

ON COOPERATION WITH STUDENTS: Messrs. Dodd, Merigold and Randolph.

ON ATHLETICS: Messrs. Brackett, Whitman and Williams.

ON THE THREE YEAR STUDENTS: The Registrar, Messrs. Blakeslee, Brooks, and Rice.

ON AUTHORIZED EXCURSIONS: The Dean, the Registrar and Mr. Brooks.

THE COLLEGE

The unique features of the College are its flexible system of admissions, the adjustments of its requirements for the bachelor's degree to different types of preparation for college work, and the emphasis upon a three-year course leading to the degree of

Bachelor of Arts for well-prepared students who are willing and able to maintain a high standard of scholarship and to devote themselves zealously to their studies.

The three-year course was adopted as the normal one for the baccalaureate degree when the College was established in 1902. This innovation was in part due to the emphasis placed upon a three-year course in the will of the founder, and in part the result of a conviction that properly prepared students could, under favorable conditions, secure in three years a training in no substantial degree inferior to that ordinarily obtained in a four-year college course. Increasing pressure, on the one hand, for the admission of high school graduates who could not qualify for the three-year course and, on the other hand, for a larger development of extra-curricular activities, including athletics, has led to a modification of this plan. Beginning with the class entering in September 1922, a regular four-year course leading to the Bachelor of Arts degree has been offered. The three-year course continues to be open to qualified students and to be emphasized in accordance with the traditional policy of the College and the intent of its founder.

The College has a competent faculty, large in proportion to the number of students, and is well equipped for the work which it undertakes. It especially commends itself to earnest young men who wish to economize either in time or money. In accordance with the expressed wish of the founder, the tuition has been kept as low as possible. A general and well-balanced undergraduate curriculum leading to the degree of Bachelor of Arts is offered. Distinctively vocational or professional work is not offered. Certain departments, particularly the Department of Chemistry, have however been able to give a training which has enabled students to take up professional employment immediately after graduation.

A complete statement in regard to fees and expenses will be found on pages 23-25.

SCHOLARSHIPS AND STUDENT AID

UNDERGRADUATE SCHOLARSHIPS are awarded to students of ability on the basis of character and need. Twenty-five of these

scholarships are available at present. Five Major Scholarships yielding tuition for one year and ten Minor Scholarships yielding tuition for one semester are awarded at the beginning of the academic year to students in regular standing who have completed at least one-quarter of the work required for the Bachelor's degree. Five other Minor Scholarships are open at the beginning of the second semester to members of the Freshman Class in regular standing. Five additional Minor Scholarships are awarded at the opening of the college year to members of the entering class whose preparatory records have been exceptionally good. Applications for these scholarships should be made upon acceptance for admission to the College.

THE LIVERMORE AND AMBULANCE SCHOLARSHIP was endowed by citizens of Worcester in honor of Charles Randall Livermore, Clark College, '17, the first Clark man to fall in battle, and of his companions in the Clark Unit of Ambulance Drivers. A scholarship of fifty dollars or more is offered from the income of the fund, to be awarded on the basis of academic success, character and usefulness to the College. The scholarship is open to students in regular standing in any class of the College who are residents of Worcester County, but preference will be given, other things being equal, to members of the Clark Unit still studying as undergraduates.

THE HENRY A. WILLIS FUND, of \$5,000 provides an annual scholarship for students coming from Fitchburg and vicinity, but in the absence of a suitable recipient from this community other disposal may be made.

THE B'NAI BRITH SCHOLARSHIP is the income from a fund of \$2,000 provided by the Order of B'nai Brith, primarily but not exclusively for the aid of Jewish students.

Applications for undergraduate scholarships should be filed with the Registrar of the College not less than ten days before the beginning of the semester for which they are to be awarded. Applicants for Major Scholarships must have attained in their previous work at Clark an average grade entitling them to rank in the highest third of their respective classes, and applicants for Minor Scholarships must have attained a rank above the middle of the class. Awards are made by the Collegiate Board.

The Board expressly reserves the right to award less than the full number of scholarships of either sort in any year if less than the full number of worthy candidates apply or if for any other reason this may seem advisable.

Aid which is given in the form of scholarships is not regarded as a loan. If however, those who avail themselves of such aid are able to return the amount in later years, the sums, whatever they may be, will be put into the Funds of the University for the use of other students in like circumstances.

LOAN FUNDS

THE CLARK COLLEGE LOAN FUND. Grants from this fund are made on recommendation of the President or Dean of the College in amounts determined by the need of the applicant but seldom in excess of one hundred dollars per year to any single applicant. The loans are covered by notes payable at a fixed date after graduation and bear interest after maturity at the rate of six percent per annum. In order to be eligible for a grant from this Fund the student's academic record must give him rank above the lowest third of his class. Applications may be made at any time.

THE ESTABROOK LOAN FUND. This is a revolving Fund created by the generosity of the late Arthur F. Estabrook of the Board of Trustees and now amounting to a total of about four thousand two hundred and fifty dollars. The fund is administered by the Dean of the College. Grants from the money available are made at any time without the requirement of the standing in scholarship applying to the College Loan Fund. The notes given to cover the grants are payable after graduation and without interest. It is expected that loans from this Fund will be repaid as promptly as possible.

THE ALUMNI FUND. An alumni loan has been contributed by L. Kelly Foster, C. B. L. Kelley, Isadore Lubin and H. M. Smith. Further gifts have increased the fund to about \$500.

Tuition of students has also been met by special donations from C. B. L. Kelley and B. F. Smith.

ADMISSION

It has been the practice to regard every admission as an "admission on trial" to the actual work of the College. A student whose record fails to meet the expectations implied by his admission may be required to withdraw at any time. No applicant will be admitted with conditions to be made up after entrance.

Applications for admission should be made as early as is practicable. Applicants should present themselves in person, if possible, to a member of the Committee on Admissions. The official transcript of the applicant's preparatory school record and the certificate of character which is required should preferably be sent directly to the College by the school official who signs them.

For additional information and for blank forms address the Registrar.

ADMISSION TO THE FRESHMAN CLASS

The requirements for admission to the Freshman Class are:

1. Graduation from an approved New England high school or institution of like standards with a course representing not less than fifteen acceptable units of school work, or the substantial equivalent of such preparation.

NOTE 1. No preparatory school will be regarded as approved which requires for graduation less than four full years of study after the usual grammar school course.

NOTE 2. The standard unit of quantity in preparation is a quarter of a year's work, the amount of work usually covered in a subject taken four or five times a week through a year of thirty-eight to forty weeks with recitation periods of not less than forty minutes.

2. A reasonable distribution of the units offered among the subjects included in the high school curriculum and a reasonable amount of continuity. A single year's work in a foreign language is usually not regarded as an acceptable unit in meeting requirements for admission.

3. Creditable standing in the preparatory school. This is generally interpreted to mean that at least two-thirds of the units presented must have received a grade which the school gives for work which it is willing to "certify" for admission to college. It

is not to be assumed however that ten units of "certified" work will of itself secure admission without regard to the quality of the remaining five units. Applicants who have made exceptionally creditable records in their preparatory school courses may be admitted with only fourteen units.

4. At least two units of Algebra or Geometry, or one unit each of Algebra and Geometry.

Applicants whose preparation has been irregular will be accepted, if at all, only after a thorough consideration of each individual case by the Committee on Admissions.

Candidates unable to meet in full the requirements indicated above may gain additional units by passing the examinations offered in June by the College Entrance Examination Board. Information concerning the Board may be obtained by pupil or teacher on addressing 431 West 117th St., New York City. Applications and fees must be forwarded to the Board at least four weeks before the intended examinations. In September examinations are conducted by the College and held in Worcester only. Examinations will be given in September in the following subjects: English, Mathematics, French, German, Spanish, Latin, Greek, History, Physics, Chemistry, Biology, Botany and Zoölogy.

Examinations will be held on the Monday and Tuesday preceding registration. In connection with these examinations, general intelligence tests may also be used.

ADMISSION TO ADVANCED STANDING

A student who wishes to enter the College after previous study at another institution of college grade is required to submit a letter of honorable dismissal, a complete transcript of his record at the last institution attended and such other information as the Committee on Admissions may request. If he is admitted he will be provisionally assigned to the Freshman, Sophomore, Junior, or Senior class and will be permitted to register for such courses as he is prepared to undertake. He will not be given a final class rating or a definite amount of credit for work done elsewhere until he has been in residence for at least one semester. After satisfying this requirement as to residence he will be given credit

for the work done at any other institution to an amount depending in each case upon the time spent upon it, the grade received, and upon the record made here. Such credit is granted by the vote of the Collegiate Board upon the recommendation of the Registrar.

The Bachelor's degree will not be conferred upon a student who has not spent at least a year in residence here, and usually not unless the time spent in residence includes the two semesters immediately preceding the granting of the degree.

FACULTY ADVISERS

When a student is accepted by the Committee on Admissions he is assigned to a member of the Faculty who will act as his adviser. The adviser will assist the student in making up his program of studies for registration and will be ready at all times to afford him help and counsel, either in regard to problems of the student's college life or other matters. The student should consult with his adviser as soon as possible in order to outline his program of studies before the opening of the college year. In all cases of action directly affecting a student the adviser is his representative before the Faculty and will present the student's views and desires.

REGISTRATION

Registration of the program of studies is required on or before the first day of the academic year, and in case of any change of program for the second semester, on or before the first day of the semester. Due notice is given by the Registrar in advance of these dates in regard to the detailed procedure of registration.

A student's record of attendance begins with the first day of the semester. Absences due to delayed registration are recorded as unexcused unless excuses acceptable to the Collegiate Board are presented.

During the first week of any semester changes of courses may be made for sufficient reason with the written approval of the student's adviser and the instructors concerned. After the first week of any semester no change may be made except such as are authorized by special vote of the Faculty or of the Collegiate Board.

The election of a *major* and *minor* is required as a part of registration at the beginning of a student's second year in College. This election when once recorded may be changed only at the beginning or end of a semester, and then only with the approval of the Dean. Although the *major* and *minor* are not officially regarded as fixed until the student's second year in College he should plan his course from the beginning as definitely as possible with his probable choice in view.

THE CURRICULUM

The curriculum is arranged upon a plan which permits considerable freedom of adjustment to individual differences of interest. Each student's program of studies contains two principal subjects (a *major* and a *minor*) together with required courses in English and certain subjects chosen in accordance with rules intended to insure a reasonable distribution of work among the various departments. A large part of each program is made up of courses chosen without restriction.

A *major* consists of at least twenty-four semester hours and a *minor* of at least eighteen semester hours made up of such courses as are specified in the announcements of the various departments.

In order to facilitate the statement of requirements, the departments of instruction are grouped in three divisions:

DIVISION A

Biology, Chemistry, Geology, Mathematics, Physics

DIVISION B

Economics and Sociology, Education and School Hygiene, Geography, History and International Relations, Psychology.

DIVISION C

Ancient Languages, English, German, Romance Languages.

STUDENT PROGRAMS

Regular students normally carry programs which yield a credit of fifteen or sixteen semester hours for each semester, in addition to the required work in Physical Training. These programs may include lectures, recitations, or work in laboratories. In general it is expected that all courses will require two hours of

preparation for each lecture or recitation. Three hours are assumed for each laboratory period which is counted as the equivalent of an hour of recitation and its two hours of preparation. A student carrying the regular program should expect his college work to require from forty-five to fifty hours of his time per week, in addition to the work in Physical Training.

Candidates for the Bachelor's degree in less than four years will generally carry programs of from eighteen to twenty hours per week and should expect to spend practically their entire time on their college work.

Each student elects one of the fourteen departments in which he will complete a *major*, and a related department in which he will complete a *minor*. The choice of *major* and *minor* usually involves certain specific requirements in other subjects. For these and for statements as to what particular courses may be used for a *major* and a *minor* the announcements of the different departments should be consulted.

First year students must make up their programs entirely from courses designated as "Open to Freshmen." The program for the Freshman year must include:

1. English
2. A course in Foreign Language
3. A course in Division A
4. A course in Division B
5. An elective
6. For three-year students, a second elective.

The elective will be in Mathematics for students who expect to *major* in Science and in Latin or Greek for students who expect to *major* in Foreign Language. Other students may meet the requirements (c) page 39, by electing either Greek, Latin, or Mathematics.

Other undergraduates may enter any course listed "primarily for undergraduates," for which, in the judgment of the instructor in charge, they are prepared. Seniors are admitted, at the discretion of the instructor in charge, to courses listed "for advanced undergraduates and graduate students;" Juniors may be admitted to these courses only by special vote of the Collegiate Board. Undergraduates are not admitted to courses "primarily

The following statement has been prepared in order that all persons interested might be fully informed as to the requirements for graduation under the regulations now in force.

Dec.15,1922

C.E.Melville, Registrar

Requirements for Graduation-Clark College

Class of 1923.

- a. 108 semester hours for 3-year students and 120 semester hours for 4-year students, including all of the subjects required by regulations printed in the May 1921 catalog.
- b. For 3-year students, an average rank not lower than Group III in all college work completed after Sept.20,1922.
For 4-year students, an average rank not lower than Group III in three-fifths of all the college work completed after Sept.20,1922.

Class of 1924.

- a. 108 semester hours for 3-year students and 120 semester hours for 4-year students, including all subjects required by the regulations printed in the May 1922 catalog.
- b. For 3-year students an average rank not lower than Group III in all college work completed after September 20,1922.
For 4-year students, an average rank not lower than Group III in three-fifths of all the college work completed after Sept. 20, 1922.

Class of 1925 and Succeeding Classes

- a. 120 ~~108~~ semester hours for all students, including all of the subjects required by the regulations of the College.
of the 120 hours required for graduation.

Notes:

- a. A student on the 3-year basis will, as a rule, carry a program of 18 or more hours per week and is required to maintain a rank in Group II or better in two-thirds of his work. Additional credit is given for high rank on the basis of one-half semester hour for each rank in Group I, and one-fourth semester hour for each rank in Group II in a three-hour course. A rank in Group IV cancels to the extent of one-half hour any extra credit resulting from ranks in Groups I or II in the same semester. A program of 18 hours a week carried through 3 years will under the above arrangements yield a total credit of 117 semester hours if a rank in Group II is secured in all courses, leaving 3 hours additional to be provided at some time during the 3 years. A student who is allowed to carry 18 hours throughout his course will normally have at the end of 3 years not less than 114 semester hours credit.
- b. In order to remain "in good standing" a student must secure a rank in Group III or better in at least 2 courses.
- c. Under the new plan of reporting students' standings the significant fact is the relative rank of a student in each individual course. In all the regulations based upon the new system:

A rank in Group I means "among the first 5 in an average group of 100."

A rank in Group II means "among the first 25 in an average group of 100".

A rank in Group III means "below the best 25 and above the lowest 25 in an average group of 100";

A rank in Group IV means "among the lowest 25 in an average group of 100"

for graduate students" except in rare cases, and then only by special vote of the Collegiate Board and of the Graduate Board.

PHYSICAL TRAINING

Regular gymnasium exercise is required of all students (with certain exceptions) for the general promotion of their health and mental efficiency. The hours at which this work is given are set at times which avoid conflict with recitation hours.

REQUIREMENTS FOR THE BACHELOR OF ARTS DEGREE

1. A minimum period of study in residence of three academic years.

2. One hundred and twenty semester hours of credit with a satisfactory standing, in addition to the required work in physical training. The 120 hours required for graduation must include:

- a. A *major* of not less than twenty-four semester hours.
- b. A *minor* of not less than eighteen semester hours.
- c. A requirement depending on the choice of the *major* subject, six semester hours.

Those majoring in Division A must take Mathematics in the Freshman year.

Those majoring in Division B must take either Greek, Latin, Mathematics or a third year college course in Modern Foreign Language, subject to the approval of the Department in which the *major* lies. (French 112, Scientific French, is not accepted in fulfillment of this requirement.)

Those majoring in Division C must take Greek or Latin in the Freshman year. This requirement is waived if two units of Greek or Latin are presented for admission.

Work taken in fulfillment of this requirement (c) may also be counted toward the fulfillment of requirement (e) or (f).

- d. *English*, twelve semester hours, including English 11 required in the first year, and six semester hours additional required in the first or second year.

- e. *Foreign Language*, at least thirty semester hours including credits accepted for admission. Foreign Language accepted for admission will be credited towards the fulfillment of this requirement on the basis of six semester hours for two units of preparatory work in one language, twelve semester hours for three units in one language and eighteen semester hours for four units.

One Foreign Language course of at least second year college grade must be taken in College.

The thirty semester hours required may be divided between any two languages or among any three, but not less than six semester hours will be accepted in any one language and at least eighteen semester hours are required in one language.

For students graduating in June, 1925 or earlier the requirement is twenty-four semester hours divided between two languages with not less than six semester hours in each.

- f. *Division A*, twelve semester hours normally, which may be increased to eighteen semester hours or diminished to six semester hours, according to the amount of Science included in the preparatory course. Six semester hours of this requirement must be in some one laboratory course in Biology, Chemistry, or Physics.

This requirement must be divided between at least two departments.

- g. *Division B*, twelve semester hours normally, which may be increased to eighteen semester hours or diminished to six semester hours, according to the subjects included in the preparatory course.

This requirement must be divided between at least two departments with not less than six semester hours in each.

3. *Physical Training*, three hours per week through the course. except during the second semester of the senior year. Any student may be excused from this requirement for adequate reasons.

Students who satisfy all of the foregoing requirements will be recommended for the degree of Bachelor of Arts unless in the

judgment of the Faculty there is cause for withholding this recommendation.

GRADING AND SCHOLARSHIP

A student's scholarship record is determined by his relative standing in each of his courses. College regulations concerning scholarship are based on the fundamental assumption that in any large class the major portion will do fairly satisfactory work and that the remainder will be about equally divided between those who clearly rank above and those who as clearly rank below the group just mentioned.

In recognition of the superior quality of work necessary to insure a high rank, additional credit of at least one-quarter hour in each semester is given to the leading twenty-five percent of the students in any three hour course. This extra credit is increased to one-half hour for the leading five percent.

A student is not permitted to count toward the B.A. degree more than forty-eight semester hours of credit for courses in which his rank places him in the lowest quarter of his class.

HONORS

"First Honors" and "Second Honors" are awarded annually to those members of each class who have, in the judgment of the Faculty, distinguished themselves by their scholarship during the year.

The Bachelor's degree is awarded "With Honor," "With High Honor," and "With Highest Honor" to those members of each graduating class who have made the most creditable records.

In 1914 the Clark Scholarship Society was organized. The society is similar in aims to the Society of Phi Beta Kappa. Its object is, "to maintain a high and broad conception of scholarship; to encourage devotion to scholarship, so conceived; to promote a close relation for mutual benefit between the undergraduate members and the faculty members of the Society." Membership in the Society is open to members of the Faculty. New student members are normally elected at the end of each year from among the men of high standing in the Junior Class. The Faculty makes nominations and the undergraduate mem-

bers of the Society elect from the men so nominated. Additional nominations are made at the middle and end of the senior year.

STUDENT LIFE

It has always been the policy of the University to give to its students the greatest possible individual liberty of action and to adopt few rules of conduct.

It is assumed that each student will conform to the recognized standards of morality, good order, and gentlemanly conduct, that he will not absent himself unnecessarily from University exercises at which he is due, and that he will give his serious and constant attention to his work as a student.

While encouraging the fullest possible measure of student self-government, the College recognizes the fact that the individuals and groups, among the undergraduates require a reasonable amount of oversight in their various undertakings.

Undergraduate organizations are under such control as will insure proper caution and recognition of responsibility in business dealings.

The general supervision of intercollegiate athletics is committed to an Athletic Board consisting of the Director of Physical Training, the Committee on Athletics of the Collegiate Board, two alumni elected by the Alumni Association, and nine student members. The actions of this Athletic Board are subject to review and veto by the Committee on Athletics.

Two formal dances, the "Junior-Freshman Prom" in the winter, and the "Senior Prom" at Commencement time, in addition to informal dances, "Bohemians," held about once in six weeks, give opportunity for relaxation and the meeting of students and faculty on a basis of general sociability. Additional opportunities of this sort are provided by the various clubs in which both students and faculty participate.

Student activities include a Glee Club and Orchestra which give a series of concerts in Worcester and elsewhere during the winter; a Debating Society whose members have made an enviable record for the University in intercollegiate debates; the Gryphon, a senior honor society, and many other organizations.

The Dramatic Association is a very active student organization which presents a number of plays each year under the direction of Professor L. H. Dodd of the Department of English.

On Sub-Freshman Day, in the spring, those who have some expectation of entering the College in September are guests of the University for the purpose of establishing mutual acquaintanceship.

THE CLARK COLLEGE MONTHLY is a magazine which was established in 1911 to provide a means of publication for the literary productions of members of the College and a forum for the expression of college sentiment, and to furnish its readers with the latest information about the life of the institution. The editorial and business management is in the hands of a student board.

The Graduate Division

GRADUATE BOARD

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SAMUEL J. BRANDENBURG

SECRETARY OF THE GRADUATE BOARD, CAREY E. MELVILLE

STANDING COMMITTEES OF THE GRADUATE BOARD

The President of the University is *ex officio* a member of all Committees.

ON CREDENTIALS: Messrs. Brooks, Blakeslee, Brandenburg and Melville.

ON PROFICIENCY IN FOREIGN LANGUAGES: Messrs. Randolph, Churchman and a representative of the student's major department.

GENERAL INFORMATION

The courses in the Graduate Division are open to properly qualified persons, both men and women.

Instruction and opportunities for original research leading to the degrees of Master of Arts and Doctor of Philosophy are offered by the following departments:

Chemistry

Economics and Sociology

Education and School Hygiene

Geography

History and International Relations

Physics

Psychology

The other departments offer courses of an advanced nature which, with the consent of the Graduate Board, may be included in the programs of graduate students, but are not prepared at present to offer complete programs leading to the higher degrees.

A complete statement regarding tuition and expenses will be found on pages 23-25.

ADMISSION

Only college graduates or those of equivalent attainments are admitted to the Graduate Division. It is highly desirable that applicants should have a reading knowledge of French and German.

Graduates of colleges on the approved list of the Graduate Board, who give evidence of superior ability and of adequate preparation for advanced study in the departments in which they propose to do their major work may be admitted by the Secretary of the Graduate Board upon the recommendation of a department. Such students may proceed to the advanced degrees in the minimum time.

Other applicants for admission will have their applications considered by the Committee on Credentials, who will determine, in consultation with the departments in which the applicants propose to do their major work, whether they may be admitted, and on what conditions.

Applications for admission should be addressed to the Secretary of the Graduate Board and should be accompanied by official certificates of previous undergraduate and graduate work.

SPECIAL STUDENTS

In addition to those who are candidates for degrees, the University admits others desiring to undertake study or research, whose attainments are such as to qualify them for the work proposed. Such persons, provided they satisfy the departments concerned as to their training and competency in the subjects to which they wish to devote themselves, are not restricted in their choice and combination of studies.

FELLOWSHIPS, SCHOLARSHIPS AND STUDENT AID

Fellowships for graduate students are provided annually from the income of the George F. Hoar Fund of one hundred thou-

sand dollars, the gift of Andrew Carnegie. Other financial assistance is made possible by the University and by various bequests.

Scholarships and fellowships (except honorary appointments) are for prospective candidates for the degree of Master of Arts or of Doctor of Philosophy.

Application blanks may be obtained from the Secretary of the Graduate Board, and applications for appointments for the succeeding year should be filed with the Secretary by March first for consideration by the Board before April first. The board may, however, consider applications made at other times. Acceptance of an appointment should be made in writing within fifteen days of notification of such appointment.

Since awards are made to students who show marked ability to carry on work in certain special lines, they are not transferable from one department to another. Scholars and fellows are expected to carry through the work of the year for which they are appointed and must devote their entire time to graduate study and research, except insofar as they may be allowed to act as assistants in their major departments, but the entire time devoted by a student to such work shall not exceed six hours per week. Authorization of any outside work whatsoever must be obtained from the Graduate Board.

Being intended primarily as honors, fellowships are awarded without reference to pecuniary needs. Those fellows able and desiring to do so may relinquish the emolument and retain the title.

The various types of fellowships and scholarships (all remitting tuition) which come under the above rulings, together with any further conditions of appointment, follow:

1. *University Graduate Scholarships.* These remit tuition only. Students who may be expected to fulfill the requirements for the Master's degree in not more than one year of residence may receive these awards.

2. *Fellowships without Stipend.* These remit tuition and may be awarded to students who have completed an amount of graduate work equivalent to the requirements for the Master's degree.

3. *Junior Fellowships.* Appointments to Junior Fellowships (stipend \$100 with remission of tuition) are reserved for those applicants who are judged to be within two academic years of their doctorate.

4. *Senior Fellowships.* Appointment to these fellowships (stipend \$200 with remission of tuition) are reserved for those who are judged to be within one year of their doctorate.

5. *University Fellowships.* There are a limited number of these fellowships (valued at \$600) which remit tuition and provide for a room during the academic year at the University dormitory and board at the Dining Hall, during the regular sessions of the University.

6. *The American Antiquarian Society Fellowship in American History,* having a value of \$300 in addition to the remission of tuition, has been established by members of the American Antiquarian Society. This fellowship will be awarded to a student whose major is in American History.

7. *Honorary Scholarships and Fellowships.* These appointments may be made at the discretion of the Graduate Board, and entitle the holder to remission of tuition and to the privileges of the University.

Other student aid is available from the following funds, with the restrictions noted.

A CITIZEN'S FUND has been established by a citizen of Worcester in the sum of five thousand dollars, the income of which is to be used for the aid of "some one or more worthy native born citizens of the City of Worcester who may desire to avail themselves of the advantages of the institution." The benefits of this fund are available to graduate students only.

THE JOHN WHITE FIELD FUND, the income of which is "to provide for the minor needs of a Scholar or Fellow," has been established by Mrs. Eliza W. Field. The fund amounts to five hundred dollars.

The following regulations apply to the award of the income of the Field Fund:

1. Regard is had to the intellectual ability of the candidate as well as to the need of pecuniary assistance.

2. Only candidates who have spent three months in graduate work at the University are considered.

3. The head of each department will consider and report to the Faculty desirable cases in his department.

4. Applications are received not later than December 15, and the awards made as soon as possible after the Christmas recess.

THE ELIZA D. DODGE FUND is a sum of one thousand dollars the income only of which is to be expended to aid graduate students of limited means engaged in research work.

LIBRARY FACILITIES

In addition to the library facilities provided by the University (see pages 27-29), students may avail themselves of the privileges of several other excellent libraries in the city. The Worcester Public Library contains some 237,000 volumes and makes accessible to the public about 600 newspapers and magazines. The library of the American Antiquarian Society, housed in the national headquarters of the society in Worcester, contains about 136,000 volumes and some 202,000 pamphlets. The library of the Worcester District Medical Society is also at the disposal of members of the University.

THE DEGREE OF MASTER OF ARTS

ADMISSION TO CANDIDACY

Students who have been admitted to the Graduate Division without special requirements or who have met such requirements, may be accepted as candidates for the degree of Master of Arts by the Graduate Board on recommendation of the Committee on Credentials. Such students must have completed one semester of full-time graduate work in residence or its equivalent at this University, and they must have filed with the Secretary of the Graduate Board an application for admission to candidacy with the endorsement of the major department.

Applications for candidacy for the Master's degree should be filed with the Secretary of the Graduate Board before the end of the first week of the semester in which the period of residence for the degree is to be completed.

REQUIREMENTS FOR THE MASTER'S DEGREE

1. *Residence.* The Master's degree will not be conferred

upon any candidate until he has completed one year of full-time work in residence, or its equivalent. (Attendance at four sessions of the Summer School will ordinarily be considered as fulfilling this residence requirement if the student's entire time is devoted to graduate work.)

If by reason of other employment a student is unable to devote his entire time to graduate study the Committee on Credentials will determine in consultation with the major department when the residence requirement shall have been met.

2. *Course Requirements.* The requirements for the Master's degree cannot be fulfilled by mere accumulation of credits. The candidate must demonstrate that he has a comprehensive knowledge of his major subject and that he is capable of carrying on a satisfactory investigation in the field of that subject. A minimum course credit of 18 semester hours in addition to the research work is required. At least one-half of the courses taken should be devoted to the major subject, and approximately one-third to a minor subject.

3. *Examinations.* Graduate students must pass all examinations in courses which they wish to present for credit. Failure to pass any course in his major subject will bar the student from obtaining his degree that year. The candidate must satisfy his *major* department that he has done his work faithfully and has mastered the subjects involved, by such written and oral examinations and other tests as the department may require.

4. *Thesis.* The candidate must present a thesis on some topic which has received the approval of his major department. This thesis must be presented to the Secretary of the Graduate Board for deposit in the Library, before the degree will be conferred.

THE DEGREE OF DOCTOR OF PHILOSOPHY

ADMISSION TO CANDIDACY

For admission to candidacy for this degree the student must have fulfilled the following conditions:

1. A written application for admission to candidacy endorsed by the major department must be filed with the Secretary of the Graduate Board.

2. Two full years of graduate work in residence, or its equivalent, must have been completed.

3. Examinations in French and German before the Committee on Proficiency in Foreign Languages must have been passed, unless another language is substituted for one of these under the authorization of the Graduate Board.

4. A written statement, approved by the chief instructor, giving the subject of the Doctor's dissertation, must be filed with the Secretary of the Graduate Board.

5. He must have demonstrated, to the satisfaction of his major department, capacity for satisfactory research.

Applications for admission to candidacy should be filed not later than November first in any academic year, by students who hope to proceed to the degree at the end of that year.

REQUIREMENTS FOR THE DOCTOR'S DEGREE

1. *Residence.* At least two years of full-time work in residence, or its equivalent, beyond the requirements for the Master's degree are necessary for the Doctor's degree. At least one year of full residence must be at this University.

2. *Courses of Study.* A fixed number of hours of credit is not specified for the Doctor's degree. However the program of study of the prospective candidate, indicating major and minor subjects and endorsed by the major department, is submitted to the Graduate Board for approval in October of each year.

3. *Examinations.* Each prospective candidate for the Doctor's degree must pass a preliminary examination in his *major* subject and a final examination in his minor subject, one year prior to the time that he expects to receive his Doctor's degree. He must also pass final examinations including at least a two hour oral examination before a jury of not less than four members, and covering broadly the ground of the dissertation and major subject. These final examinations must be taken after the completion of one year of full-time work in residence subsequent to the preliminary examinations.

4. *Dissertation.* For the degree of Doctor of Philosophy an indispensable requirement is a dissertation upon an approved subject, to which it must be an original contribution of value. The following conditions apply to its acceptance:

- a. The dissertation must be presented to the instructor under whose direction it is written, and accepted by him before the final oral examination. It must be laid before the jury of examination in form suitable for publication. This copy of the dissertation shall be delivered to the Secretary of the Graduate Board to be deposited in the Library, where it shall remain unless exchanged for a printed copy.
- b. One hundred printed copies of the dissertation (or an abstract acceptable to the chief instructor) shall be delivered by the candidate to the Secretary of the Graduate Board at least one week before the degree is to be conferred. In certain cases the number of required copies may be reduced to fifty.

If the printed copies are not delivered to the Secretary of the Graduate Board, the candidate must file with the Secretary an acceptance of the dissertation (or abstract) for publication by a responsible editor or publisher, such publication to be within two years after the final examinations. If the above conditions are not fulfilled, the candidate shall deposit with the Bursar the sum of \$75.00 or an acceptable bond for that amount as surety of publication. In any case, if the printed copies are not delivered, a duplicate copy of the dissertation must be presented to the Secretary of the Graduate Board not later than one week before the degree is to be conferred.

- c. The favorable report of the chief instructor, filed in writing with the Secretary of the Graduate Board, shall be a sufficient authorization for printing as a dissertation. The printed copies shall bear upon the cover and title page the statement of approval in the following words, over the signature of the chief instructor:

A dissertation submitted to the Graduate Board of Clark University, Worcester, Massachusetts, in partial fulfillment of the requirements for the Degree of Doctor of Philosophy, and accepted on the recommendation of
(NAME OF CHIEF INSTRUCTOR.)

The Graduate School of Geography

STAFF

WALLACE W. ATWOOD, PH.D., Professor of Physical and Regional Geography and Director of the Graduate School of Geography.

ELLEN C. SEMPLE, LL.D., Professor of Anthropogeography.

OLIVER E. BAKER, PH.D., Acting Professor of Agricultural Geography.

CHARLES F. BROOKS, PH.D., Associate Professor of Meteorology and Climatology.

CLARENCE F. JONES, PH.D., Assistant Professor of Economic Geography.

DOUGLAS C. RIDGLEY, M.S., Lecturer in Geography.

CURTIS F. MARBUT, PH.D., Special Lecturer on Soils of North America.

HOMER L. SHANTZ, PH.D., Special Lecturer on Natural Vegetation of North America

HARRY N. WHITFORD, PH.D., Special Lecturer on Forests of North America.

OTHER MEMBERS OF THE UNIVERSITY STAFF OFFERING CLOSELY RELATED WORK

GEORGE H. BLAKESLEE, PH.D., Professor of History and International Relations.

ALFRED L. P. DENNIS, PH.D., Professor of Modern History.

WILLIAM L. LANGER, PH.D., Assistant Professor of European History.

HOMER P. LITTLE, PH.D., Professor of Geology.

SAMUEL J. BRANDENBURG, PH.D., Professor of Economics.

HARRY E. MILLER, PH.D., Assistant Professor of Economics.

GENERAL STATEMENT

During the last few years the American people have been awakened, in a remarkable way, to an interest in Geography. The period of isolation in national development is passed, and we have come to realize, almost suddenly, that the United States of America is one of the leading nations of the world and vitally interested in almost everything that is going on in the world.

This awakening, and the consequent broadening of our horizon, have forced us to recognize that we have neglected in this country the scientific study of Geography. Many of the universities and colleges of this country are now calling for trained geographers. Commissioners of education, normal schools, and high schools are looking for men or women who can serve as supervisors or as special teachers of Geography. The large financial houses are endeavoring to train men in commercial Geography in their own schools. The Departments of the Government are now using trained geographers, and the Civil Service Commission has recently recognized the profession of Geography. No one should enter consular or diplomatic service who has not been trained in the geography of this country and in the geography of the world. The intelligent reading of current literature is demanding a greater and greater knowledge of the peoples and of the conditions in distant lands.

In the Graduate School of Geography opportunities are given to properly qualified students to secure special training in Geography. The staff is composed of experts in the various fields of Geography. They must of necessity spend a portion of their time in travel and in field studies, but while in residence, they offer regular courses of instruction and direct advanced students in research work. It is not the intention to offer all courses of instruction each year; many of them are given once in two years. Abundant opportunities for instruction are provided, but graduate students should not burden themselves by attending too many lecture courses. They must depend very largely for their growth upon their individual efforts in the pursuit of research work, under the direction of members of the staff.

Advanced studies in History, Economics, and Sociology, as well as a reading knowledge of the modern languages are important to all students of Geography, and the attention of such students is called to the announcements in those several departments. The map collection and the Library offer unusual facilities for research work in residence, but it is hoped that all graduate students, before completing their University work, may undertake field studies.

The aim in conducting the Graduate School of Geography is to promote in every way possible productive scholarship and to train those who wish to enter the profession to become leaders in their chosen fields of work.

A complete statement regarding tuition and expenses, Fellowships and Scholarships, and general conditions of work will be found on pages 23-25, 31-33 and 45-48.

CONSPECTUS OF COURSES IN GEOGRAPHY

Outline for 1924-25

(Courses in brackets to be omitted in 1924-25. Credit for all courses except 25, 35, and 36 is 3 hours.)

Hour	1st Semester	2nd Semester
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FIRST AND SECOND YEAR COURSES

MWF 10 11	Elements of Geography	12 Economic Geography
Hours to be arranged		13 Field Course: The Geography of Worcester and its Environs
TTS 11 14	The Weather and its Relation to Human Affairs (Through the year.)	
MWF 11 15	Influence of Geography on American History	

THIRD AND FOURTH YEAR COURSES

TTS 10	[21 Economic Geography of North America]	
	22 Economic Geography of South America	23 Agricultural Regions of the United States and Canada
MWF 4		261 Geography in Education
S 9	25 Geography for Teachers (through the year, 1 hour.)	

ADVANCED COURSES

(For Graduates, and Seniors in special cases)

MWF 9	30 Physiographic regions of the World (Through the year.)	
TTS 9	31 Climates of the world (Through the year)	
MWF 10	[32 General Principles of Anthropogeography]	
	33 Geography of the Mediterranean Region	34 Land Utilization in the United States
Tu. 3-5	[35 Geography of Europe]	
	36 Geography of Eastern Asia, with special reference to the economic, cultural and territorial development of the Japanese Empire (2 hrs.)	
Hours to be arranged		[39 Field Studies in Geography]

Courses 21, 32, 35, and 39 will be omitted in 1924-25, but offered in 1925-26.

Courses 13, 15, 33, and 36 will be omitted in 1925-26.

GEOGRAPHY FOR UNDERGRADUATES

All undergraduates taking courses in Geography will be expected to begin with 11, Elements of Geography. Minors and Majors are available in several special fields of Geography:

Courses for Minor	Additional Courses for Major
Physiography: Geog. 11, Geol. 11, Geog. 30	(None offered)
Climatology: Geog. 14, 31	(None offered)
Physiography and Climatology: Geog. 11, 14, Geol. 11	Geog. 30, 31
Anthropogeography or Geography in History: Geog. 11, 12, 15, and 32 or 33	Geog. 33 or 32, and 34, 35, 36, 37
Economic Geography: Geog. 11, 12, 16, 21	Geog. 22, 23, 34, and 33 or 35 and 36

Many other combinations are possible, *e.g.*, to cover particular continents or major portions of them. (See course summaries).

Students majoring in Physics, History, Economics, or Sociology can find closely related minors in Geography. Those majoring in some phase of Geography can likewise find related minors in Physics, Geology, Biology, History, Economics, or Sociology.

GEOGRAPHY FOR GRADUATES

Of the 18 courses in Geography, 13 are offered for Graduates, and the other 5 are open (without graduate credit) to those who need to fill gaps in subjects usually covered before entering the Graduate School. Graduate students in History, Economics and Sociology can find Geography courses closely associated with their major work, and acceptable for credit in their major departments.

ADMISSION TO GRADUATE SCHOOL OF GEOGRAPHY

The School of Geography is open to any who wish to receive professional training in Geography.

MASTER OF ARTS IN GEOGRAPHY

Admission to candidacy for the degree of Master of Arts in Geography will be granted to a regularly enrolled graduate student after he passes an oral examination of about an hour's dura-

tion on Physiography, Climatology, Economic Geography, and the Geography of some continent. Those entering the School of Geography without sufficient knowledge of these basic subjects may take courses offered in these subjects at Clark at the same time that they start on more advanced work.

Courses of study leading to the degree of Master of Arts in Geography should include Physiographic Regions of the World, Climates of the World, and Anthropogeography. Eight or nine of the semester hours required to make up the twenty semester hours of course work may be taken either in the School of Geography, or in the Graduate Departments of Economics and Sociology, and History and International Relations. A geographical thesis of such scope as to require about half as much time as that spent in course work must be submitted in final form to the head of the School not less than three weeks before the Commencement when the candidate expects to receive his degree. Candidates in residence are expected to participate in the Seminar in Geography, and will be asked to present and discuss at the Seminar their thesis outlines and problems as their work progresses.

All candidates must pass satisfactorily a final examination based upon their graduate studies and their thesis problem.

DOCTOR OF PHILOSOPHY IN GEOGRAPHY

Admission to candidacy for the degree of Doctor of Philosophy in Geography may be granted after a student has completed at least forty semester hours, or equivalent, of graduate work, of which not less than twenty-four hours shall have been in geography, provided that the candidate has passed an oral examination, or examinations, covering all but the thesis requirements for the degree of Master of Arts in Geography, and the advanced phases of any one of the following fields: Agricultural Geography, Anthropogeography, Climatology, Economic Geography, Geography in Education, Geography in History, Physiography, or Regional Geography. The last mentioned oral examination should be taken not less than eight months prior to the time when the candidate expects to receive his degree, so that in case deficiencies are found there will be ample time to remedy them. An acceptable dissertation is to be submitted in final form to the

Director of the School of Geography not less than four weeks before the Commencement when the candidate expects to receive his degree. This dissertation should be of such a scope that its preparation should require the equivalent of at least a full academic year, and its content must satisfy the examining committee that it is an original research contribution. The candidate will be required to defend his thesis satisfactorily in a final oral examination of about two hours duration.

COURSES IN GEOGRAPHY

1. PRIMARILY FOR UNDERGRADUATES

141a. (To be numbered 11a in 1924-25). THE ELEMENTS OF GEOGRAPHY. An introductory study of the relations between man and the elements of the natural environment. The various elements of the natural environment, such as climate, land forms, soils, surface, waters, mineral deposits, and native vegetation are considered in relation to man's adjustment to them separately and as type environmental complexes.

Open to Freshmen.

Three hours, first semester. M. W. F., 10.

ASSISTANT PROFESSOR JONES.

12b. ECONOMIC GEOGRAPHY. A study of the influence of the natural environment on the production of and trade in the more important agricultural, mineral, forest, factory, and sea products; continental and ocean trade routes; major commercial divisions and trade regions of the world.

Prerequisite: Geography 11a.

Open to Freshmen.

Three hours, second semester. M. W. F., 10.

ASSISTANT PROFESSOR JONES.

13b. FIELD COURSE: THE GEOGRAPHY OF WORCESTER AND ITS ENVIRONS. An analysis of the economic activities of Worcester in relation to the elements of the natural environment; the utilization of outlying lands, and areas within the city. The course is based chiefly on field work which affords training in detailed mapping, sketching, field note taking, and an investigation

of local literature. The course also involves the recognition of geographic problems, their analysis, and interpretation.

Prerequisites, Geography 11a or equivalent.

Three hours, second semester.

ASSISTANT PROFESSOR JONES OR MR. RIDGLEY.

New course, to be offered by Mr. Ridgley in 1924-25.

14. THE WEATHER AND ITS RELATION TO HUMAN AFFAIRS.

This course aims (1) to give the student an understanding of weather processes, largely through watching the passing weather, (2) to train him in daily local forecasting, (3) to show how various weather combinations make up the several types of climate, and (4) all through the year to bring out the intimate effects of the weather on all sorts of human affairs. This course is preparatory for course 31 and is basic for most all advanced studies in Geography.

Indivisible course.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 11.

ASSOCIATE PROFESSOR BROOKS.

New course, to be offered in 1924-25.

121a. THE PASSING WEATHER. The elementary physics of the atmosphere, especially as manifest in the passing weather. This course takes up the atmosphere, sources of its energy, heating and cooling of the air, temperatures at different heights, moisture in the atmosphere, pressure, winds, storms, world weather and long-range forecasting, and the applications of meteorology by government weather bureaus especially to agriculture, aeronautics, engineering, industry, commerce and public health. Out-of-door observation of the weather, and daily forecasting.

Three hours, first semester. Tu. Th. S., 11.

ASSOCIATE PROFESSOR BROOKS.

Made part of course 14 for 1924-25 and thereafter.

15a. INFLUENCE OF GEOGRAPHY ON AMERICAN HISTORY. An interpretation of the adjustments of a rapidly expanding people to varied and changing environments; the United States as a world power.

Prerequisites: Geography 11a and 12b, or History 11.

Three hours, first semester. M. W. F., 11.

ASSISTANT PROFESSOR JONES.

New course, to be offered in 1924-25.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

243a. (To be numbered 21a in 1924-25 and thereafter).
ECONOMIC GEOGRAPHY OF NORTH AMERICA. A survey of the principal economic activities of the people in each of the major geographic regions of North America from the standpoint of their relation to the natural environmental complex.

Prerequisites: Geography 11a and 12b.

Three hours, first semester. Tu. Th. S., 10.

ASSISTANT PROFESSOR JONES.

To be omitted in 1924-25.

22b. ECONOMIC GEOGRAPHY OF SOUTH AMERICA. A study of the economic activities of the people of South America in relation to the environmental complex of the various geographic regions; trade regions and commercial opportunities.

Prerequisites: Geography 12a or 21a and twelve hours of economics.

Three hours, second semester. Tu. Th. S., 10.

ASSISTANT PROFESSOR JONES.

To be offered first semester 1924-25 as 22a.

23b. AGRICULTURAL REGIONS OF THE UNITED STATES AND CANADA. A course describing the agriculture of North America north of Mexico and the influence of physical and economic conditions in directing its development. The description will proceed by regions, subdivided into areas and these into districts, and, after a brief review of the physical conditions, will include a discussion of the crops, live stock, systems of farming, land tenure, and the composition and characteristics of the rural population.

Prerequisites: Geography 12a or 21a, and twelve hours of economics.

Three hours, second semester. M. W. F., 9.

ACTING PROFESSOR BAKER.

Given in 1923-24 as the second semester of course 311. To be offered in the second semester, Tu. Th. S., 10, in 1924-25.

231a. (To be numbered 32a, *q. v.*, in 1924-25). GENERAL PRINCIPLES OF ANTHROPOGEOGRAPHY.

232a. (To be numbered 35a, *q. v.*, in 1924-25). GEOGRAPHY OF EUROPE.

261b. GEOGRAPHY IN EDUCATION. A survey of geography in the present-day American school system, including elementary school, high school, teacher-training institutions, colleges and universities; examination and comparison of present courses of study in each group of schools; problems of high school and normal school emphasized; designed to meet the needs of those expecting to teach Geography.

Three hours, second semester. M. W. F., 4. MR. RIDGLEY.

25. THE TEACHING OF GEOGRAPHY. The scope and purpose of Geography in the elementary school and high school. A study of methods appropriate to the teaching of geography, including the problem method and project method. Standard equipment for Geography teaching. Library reading closely related to the classroom work of members of the class.

One hour, through the year. Saturday 9. MR. RIDGLEY.
New course, to be offered in 1924-25.

222a. CLIMATOLOGY.

Three hours, first semester. ASSOCIATE PROFESSOR BROOKS
To be included in course 31 in 1924-25.

3. PRIMARILY FOR GRADUATES

30b. (To be numbered 30, in 1924-25.) PHYSIOGRAPHIC REGIONS OF THE WORLD. An intensive and critical study of the physiographic evolution of land forms in each of the continents. It is planned for those students who wish to secure special training in Physiography and who are sufficiently familiar with the principles of Geology and Physiography to review all important contributions to Physiography.

Prerequisites: Geology 12 and Geography 11a.

Three hours, second semester. M. W. F., 11.

PROFESSOR ATWOOD.

In 1924-25 half the first semester's work in the Geography of North America (311) and the above course (30b) will be included in course 30, given through the year. M. W. F., 9.

31. CLIMATES OF THE WORLD. A study of the climates of the world in a comparative way, to bring out particularly the peculiarities of each climate and its effect on man as compared with its group types. Most of the first semester will be devoted to the climates of North America.

Prerequisite: Geography 14.

Three hours, through the year. Tu. Th. S., 9.

ASSOCIATE PROFESSOR BROOKS.

In 1923-24 the subject matter of this course was included in the first semester of course 311 and in course 222a.

311. GEOGRAPHY OF NORTH AMERICA. The physiography, climatology, soils, native vegetation and agriculture of North America, presented in succession by specialists in each phase. The work of the second semester is all agricultural geography. Divisible course.

Three hours, through the year, first semester M. T. W. Th. F. Second semester M. W. F., 9. PROFESSORS ATWOOD, BROOKS, MARBUT AND SHANTZ in first semester, and BAKER in second semester.

This course in 1924-25 will be divided among courses 30, 31, and 23b.

32a. (Numbered 231a in 1923-24). GENERAL PRINCIPLES OF ANTHROPOGEOGRAPHY. This course considers the operation of geographic factors in the economic, social and political development of peoples; the influences of location, area, relief, coastline, drainage systems, climate, and other geographic conditions, both separately and in their mutual interplay. Ellen C. Semple's *Influences of Geographical Environment* will be used as a text.

Three hours, first semester. M. W. F., 10.

PROFESSOR SEMPLE

To be omitted in 1924-25.

33a. THE GEOGRAPHY OF THE MEDITERRANEAN REGION, ESPECIALLY IN RELATION TO ANCIENT HISTORY. Lectures and

assigned readings. A geographic interpretation of ancient history in Mediterranean lands, embracing a study of the various geographic factors operative in the countries bordering this enclosed sea under the peculiar influences of the Mediterranean climate, at a time when the Mediterranean region constituted most of the known world. The lectures discuss the intercontinental location of the Mediterranean Sea, the barrier boundaries and the breaches in the same, the size, shape, and subdivisions of this marine basin, its relation to the Atlantic Ocean as also to the Red and Black Seas; the prevailing mountainous relief of Mediterranean lands, highly articulated coasts, peninsulas, islands, and continental hinterlands, rivers and river valleys; rainfall, temperatures, and winds; and finally, the effect of these various geographic conditions upon ancient agriculture, stock raising, forestry, industry, navigation, trade, and colonization.

Three hours, first semester. M. W. F., 10.

PROFESSOR SEMPLÉ

Omitted in 1923-24. To be offered in 1924-25.

34b. LAND UTILIZATION IN THE UNITED STATES. This course will outline the physical and economic conditions which determine the utilization of land for crops, pasture and forest; describe the geographic distribution of such lands; consider the probable need of these classes of land as population increases, and the possibilities of meeting this need by irrigation, drainage, clearing, more intensive cultivation, and other means; closing with a discussion of a national land policy.

Three hours, second semester. Tu. Th. S., 9.

ACTING PROFESSOR BAKER.

To be offered in 1924-25, M. W. F., 10.

35a. (Numbered 232a in 1923-24.) GEOGRAPHY OF EUROPE. This course includes a study of the climate, relief, coast line and marginal seas of the continent as a whole, to be followed by a detailed consideration of the economic and political geography of the Western European states.

Two hours, first semester. Tu., 3-5.

PROFESSOR SEMPLÉ

To be omitted in 1924-25.

36a. THE GEOGRAPHY OF EASTERN ASIA, with special reference to the economic, cultural and territorial development of the Japanese Empire. A lecture course with generous reading assignments.

Two hours, first semester. Tu., 3-5.

PROFESSOR SEMPLÉ

New course, to be offered in 1924-25.

331a. (To be numbered 37a in 1924-25). SEMINAR FOR ANTHROPOGEOGRAPHY. Themes for investigation and discussion will be assigned to the seminar group as a whole, each week for the first two months. Later such themes will be assigned to individuals, with a special view to training in the inductive methods of research.

Two hours, first semester. Th., 4-6.

PROFESSOR SEMPLÉ

38b. SEMINAR IN GEOGRAPHY. Round-table discussions will be conducted for the graduate students of geography, and recent publications will be reviewed. Students will also present portions of their thesis work from time to time.

Two hours, second semester. Th., 4-6.

PROFESSOR ATWOOD.

39. FIELD STUDIES IN GEOGRAPHY (Advanced Course). The field in 1925 will be the Maritime Provinces of Canada and the Lower St. Lawrence Valley. This area affords excellent opportunity for the study of contrasted environments and consequent economic diversity. Among the more important areas to be studied are The St. John's Valley, The Annapolis-Cornwallis Valley, The Sydney District, Prince Edward Island, The Canadian Appalachians, The St. Lawrence Valley and The Laurentian Upland. Four weeks will be spent in the field beginning August 1. Students entering this course should have had Geography 13 or equivalent training in field methods in Geography so that this course may stress the analysis and interpretation of field problems. Registration only after consultation with the department.

Credit *four semester hours* for satisfactorily completed field work, and an *additional semester hour* for each article on some

region studied when approved by the instructor and accepted for publication by some geographic magazine.

ASSISTANT PROFESSOR JONES

310. RESEARCH IN REGIONAL GEOGRAPHY

PROFESSOR ATWOOD

311. RESEARCH IN PHYSIOGRAPHY

PROFESSOR ATWOOD

312. RESEARCH IN METEOROLOGY OR CLIMATOLOGY

ASSOCIATE PROFESSOR BROOKS

313. RESEARCH IN THE GEOGRAPHY OF SOUTH AMERICA

ASSISTANT PROFESSOR JONES

314. RESEARCH IN ECONOMIC GEOGRAPHY

ASSISTANT PROFESSOR JONES

315b. RESEARCH IN AGRICULTURAL GEOGRAPHY AND LAND
UTILIZATION

PROFESSOR BAKER

316. RESEARCH IN GEOGRAPHY IN EDUCATION.

MR. RIDGLEY

HOME STUDY COURSES IN GEOGRAPHY

There are many teaching Geography in the schools of this country who have not had an opportunity to receive adequate special instruction in this field of work. During the last few years there have been notable developments in the methods used in the teaching of Geography and notable changes in the political geography of the world. The human point of view should now dominate in all of the instructional work done with children; the subject should broaden the knowledge and world sympathies of the American people, and it is necessary for all teachers of Geography who wish to be abreast of the times to carry on in some way their own study and training.

The University wishes to extend its services as widely as possible for the betterment of the teaching of Geography, and therefore, in addition to the regular resident courses and the Summer School work will offer a series of Home Study Courses. Mr. D. C. Ridgley, formerly of the Illinois State Normal University, is in immediate charge of this work.

COURSES

1. THE TEACHING OF GEOGRAPHY IN THE ELEMENTARY GRADES.
 2. INDUSTRIAL AND COMMERCIAL GEOGRAPHY.
 3. GEOGRAPHY OF NORTH AMERICA.
 4. GEOGRAPHY OF SOUTH AMERICA.
 5. GEOGRAPHY OF EUROPE.
 6. GEOGRAPHY OF EASTERN CONTINENTS.
 7. THE PHYSICAL GEOGRAPHY OF THE LAND.
 8. THE PASSING WEATHER.
 9. CLIMATOLOGY AND CLIMATES OF THE WORLD.
- SPECIAL STUDIES IN GEOGRAPHY FOR ADVANCED STUDENTS.

CREDITS AND TUITION

Each course when satisfactorily completed carries a college credit of three semester hours. That is, each course is the equivalent of a college course taken in residence, meeting three times per week for one semester of 18 weeks. Each course consists of 36 written lessons. In general, the preparation and the writing of each lesson will require about four or five hours.

The tuition for each course is eighteen (\$18.00) dollars, payable at the time of enrollment. A course may be begun at any time, but it should be completed within 12 months.

Further information about these courses will be sent upon the receipt of a request. Address all communications to Clark University, Home Study Department, Worcester, Mass.

The Summer School

The session of 1924 will begin July 7 and end August 15. Geography and History constitute the chief departments of instruction, while courses are offered also in Psychology, Economics, English, French and German.

Qualified students are admitted upon presentation of proper credentials. Both undergraduate and graduate work is offered, and credit awarded accordingly. Work done in the Summer School may be counted, subject to the regulations of the Collegiate and Graduate Boards and of the various departments of the University, toward fulfillment of the requirements for the degrees of Bachelor of Arts and Bachelor of Education and the advanced degrees of Clark University.

The tuition charges are twenty or thirty-five dollars for the session, according to the number of courses taken. Rooms in the vicinity of the University cost from three dollars a week up, and the University Dining Hall will provide board this summer at \$8.00 per week.

The Summer School Bulletin, published about March 1, and containing detailed information about the coming session, with description of the various courses, may be had upon application to the Director of the Summer School, Clark University, Worcester, Mass.

The names of the students who attended the session of 1923 will be found incorporated in the Register with the designation "ss," beginning on page 128 of this Catalogue. The Instructional and Administrative Staff for the session of 1924 is as follows:

WALLACE WALTER ATWOOD, PH.D.	Geography
President of Clark University and Director of the Graduate School of Geography.	

CHARLES BREWSTER RANDOLPH, PH.D.	Director
Professor of German, Clark University.	

WILLIAM HENRY BARKER, B.Sc., F.R.G.S., F.R.A.I. Geography
Head of the Department of Geography, University of
Manchester, England.

CHARLES FRANKLIN BROOKS, PH.D. Meteorology and Climatology
Associate Professor of Meteorology, Clark University.

DOUGLAS CLAY RIDGLEY, M.S. Geography
Lecturer in Geography, Clark University.

EARL CLARK CASE, B. ED. Geography
Assistant Professor of Geography, University of Cin-
cinnati.

RODERICK PEATTIE, PH.D. Geology
Assistant Professor of Geology, Ohio State University.

WILLIAM LEONARD LANGER, PH.D. History
Assistant Professor of History, Clark University.

RALPH VOLNEY HARLOW, PH.D. History
Assistant Professor of History, Boston University.

SAMUEL J. BRANDENBURG, PH.D. Economics
Professor of Economics and Sociology, Clark Univer-
sity.

CARL MURCHISON, PH. D. Psychology
Professor of Psychology, Clark University.

LORING HOLMES DODD, PH.D. English
Professor of English, Clark University.

ROBERT STANLEY ILLINGWORTH, A.B. Dramatics
Professor of Public Speaking, and Director of Dram-
atics, Lafayette College.

PHILIP HUDSON CHURCHMAN, PH.D. French and Spanish
Professor of Romance Languages, Clark University.

THEKLA E. HODGE German
Head of the Department of Modern Languages, Athol,
Mass., High School.

CAREY EYSTER MELVILLE, A.B.

Associate Professor of Mathematics and Registrar,
Clark University. Registrar of the Summer School.

DOROTHY ANNETTE DUGGAN

Secretary to the Director.

COURSES OF INSTRUCTION

GEOGRAPHY

SS11. ELEMENTARY GEOGRAPHY AND CLIMATOLOGY. MESSRS. ATWOOD AND BROOKS.

SS15. ECONOMIC AND COMMERCIAL GEOGRAPHY. MR. CASE.

SS17. GEOGRAPHIC INFLUENCES IN THE HISTORY OF THE UNITED STATES. MR. CASE.

SS18. GEOGRAPHY IN EDUCATION FOR SPECIAL TEACHERS. MR. RIDGLEY.

SS21. PHYSIOGRAPHIC REGIONS AND CLIMATOLOGY OF NORTH AMERICA. MESSRS. ATWOOD AND BROOKS.

SS23. ECONOMIC GEOGRAPHY OF NORTH AMERICA. MR. CASE.

SS25. GEOGRAPHY OF THE BRITISH ISLES AND OF CONTINENTAL EUROPE. MR. BARKER.

SS28. THE TEACHING OF GEOGRAPHY IN THE ELEMENTARY SCHOOL. MR. RIDGLEY.

SS29. INTRODUCTION TO GENERAL GEOLOGY. MR. PEATTIE.

SS30. SEMINAR IN GEOGRAPHY. MR. ATWOOD AND MR. BROOKS.

SS31. RESEARCH IN REGIONAL GEOGRAPHY. MR. ATWOOD.

SS32. RESEARCH IN CLIMATOLOGY. MR. BROOKS.

HISTORY

SS14. THE HISTORY OF RUSSIA SINCE THE ACCESSION OF ALEXANDER I. MR. LANGER.

SS15. THE DEVELOPMENT OF THE EUROPEAN SITUATION SINCE THE TREATY OF VERSAILLES. MR. LANGER.

SS16. THE RECENT HISTORY OF THE UNITED STATES, 1865-1923. MR. HARLOW.

SS17. THE AMERICAN COLONIES AND THE REVOLUTION, 1607-1783. MR. HARLOW.

ECONOMICS

SS1. PRINCIPLES OF ECONOMICS. MR. BRANDENBURG.

SS2. ECONOMIC HISTORY OF THE UNITED STATES. MR. BRANDENBURG.

PSYCHOLOGY

SS1. EDUCATIONAL PSYCHOLOGY. MR. MURCHISON.

SS2. MENTAL MEASUREMENTS. MR. MURCHISON.

ENGLISH

SS3. MODERN VERSE. MR. DODD.

SS4. MODERN DRAMA. MR. DODD.

SS5. DRAMATICS: PRODUCING OF PLAYS IN SCHOOLS AND COLLEGES. MR. ILLINGWORTH.

SS9. SHAKESPEARE. MR. ILLINGWORTH.

SS10. BROWNING. MR. DODD.

SS11. MODERN LITERATURE. MR. ILLINGWORTH.

NOTE: Four of the courses above will be given, courses 3 and 5, 4 or 10, and 9 or 11, the choice between the latter depending upon the number of students registering for each course.

FRENCH

SS6. PRONUNCIATION AND CONVERSATION. MR. CHURCHMAN.

SS7. ADVANCED SYNTAX. MR. CHURCHMAN.

NOTE: One or more of the following courses will be offered in case a sufficient demand arises: ELEMENTARY FRENCH, INTERMEDIATE FRENCH, ELEMENTARY SPANISH.

GERMAN

SS1. ELEMENTARY GERMAN. MRS. HODGE.

SS2. GRAMMAR REVIEW AND READING OF GERMAN PROSE. MRS. HODGE.

The Bachelor of Education Degree

For some time the University has had under consideration the advisability of establishing an undergraduate degree for teachers who should complete about two years of college work following a two years' normal school course.

At the meeting of the Board of Trustees held October 26, 1923, formal action was taken authorizing the faculty to receive candidates for the degree of Bachelor of Education under the following regulations:

1. Candidates for this degree may enter courses in the Summer School and such courses as may be open to them during the academic year under the regulations of the University.

2. **ADMISSION REQUIREMENTS.** The completion of a standard two-year course in a Massachusetts State Normal School, or the reasonable equivalent of such a course.

3. **REQUIREMENTS FOR THE DEGREE:**

- a. At least one year's teaching experience.
- b. At least 30 semester hours of credit earned in residence at Clark University.
- c. 120 semester hours of college credit, including advanced standing based upon the admission requirements.
- d. Requirements in particular subjects:

- (1) Six semester hours in Psychology or Education taken after the completion of the two-year Normal School course or its equivalent.
- (2) Six semester hours of Laboratory Science taken after the completion of the two-year Normal School course or its equivalent.
- (3) Ten semester hours of English, which may be taken in whole or in part in the Normal School course.
- (4) Ten semester hours of foreign language, which may be taken in whole or in part in the Normal School course.

- (5) Twelve semester hours of Economics, Geography, Government, History, or Sociology, at least six of which must be taken after the completion of the two-year Normal School course or its equivalent.

4. STANDARD OF SCHOLARSHIP: The same standard of scholarship will be required of candidates for this degree as for the degree of Bachelor of Arts.

5. ADVANCED STANDING:

- a. Credit of 54 semester hours will normally be given for the standard two-year course in a Massachusetts State Normal School. This may be reduced in special cases.
- b. Credit will be allowed for work done at other Universities, Colleges, or Normal Schools, subject to reasonable regulations.
- c. Not more than 30 semester hours credit may be allowed for home-study or extension courses, the acceptance of any work of this type to be subject to the judgment of the proper University authority.

Inquiries regarding the degree should be addressed to the Registrar of the University.

Departmental Announcements and Lists of Courses

Courses offered by the several departments are listed under three headings:

1. PRIMARILY FOR UNDERGRADUATES, designated by numbers beginning with the figure (1).
2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS, designated by numbers beginning with the figure (2).
3. PRIMARILY FOR GRADUATE STUDENTS, designated by numbers beginning with the figure (3).

All courses listed are being given during the current academic year and will be offered in 1924-25 unless a statement to the contrary is made.

Credit for the first semester alone will be given in all courses except those which are stated to be indivisible.

Any course may be entered at the beginning of the second semester by students who are prepared to take up the work of the course at that time.

DEPARTMENT OF ANCIENT LANGUAGES

PROFESSOR BRACKETT

All courses in Greek and Latin are designated primarily for undergraduates. To any of these courses, however, properly qualified graduate students may be admitted by special permission.

For a major in Ancient Languages the requirement is twenty-four semester hours from the courses described below, of which not more than six semester hours may be in elementary courses (Greek 11 and Latin 11).

Provision is made in the courses in Greek both for students who have previously studied Greek in the high school, and for those who wish to begin the subject in college. In admitting

students to the College full credit is given for one, two, or three years of high school Greek. Those who have pursued successfully the study of Greek for two or three years may enter directly into course 12. Students who purpose to study Greek in college are strongly advised to take this subject in the preparatory school for two years if possible.

Since a substantial number of students are admitted to the College who have not previously studied Latin, the department offers to such students an opportunity to take an introductory course in this subject.

COURSES IN GREEK

1. PRIMARILY FOR UNDERGRADUATES

11. FIRST YEAR COURSE. The purpose of this course is to furnish to mature students who have never studied Greek an opportunity to begin this subject in college. The course not only has in view the needs of students of language and literature, but in connection with the use of Greek in scientific nomenclature should have value for students of science as well. Indivisible course.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 9.

PROFESSOR BRACKETT

12. PLATO, *Apology*; HOMER, *Iliad*. In the first part of the first semester Plato's *Apology of Socrates* is read, and the work centers about the life, character, and later influence of Socrates. The remainder of the year is devoted to a study of the *Iliad*. The aim in this work is distinctly literary, and such selections are read as will enable the student to gain as far as possible an intelligent appreciation of the poem as a whole.

Open to Freshmen.

Three hours, through the year.

PROFESSOR BRACKETT

Omitted in 1923-24.

13. THE GREEK DRAMA. Aeschylus, *Prometheus Bound*; Sophocles, *Oedipus Tyrannus*; Euripides, *Hippolytus*. This course is designed to give a general view of Greek tragedy. Lec-

tures or discussions deal with the staging of a Greek play, the origin and development of the drama, and the other works of the authors read. Three or four plays of each of these authors are read in translation and discussed in class.

Three hours, through the year.

Omitted in 1923-24.

14. HERODOTUS; Lyric Poetry; THEOCRITUS.

Three hours, through the year.

Omitted in 1923-24.

16. GREEK TRAGEDY IN ENGLISH. This course deals with Greek tragedy as represented in the extant works of Aeschylus, Sophocles, and Euripides. All the reading is done in English translations, for the most part in verse. The central aim of the course is an intelligent and appreciative reading of the plays. Much attention is devoted to the connection between Greek and modern drama. The instructor will deal, in lectures, with the origin and development of Greek tragedy, the Greek theatre and related subjects, and Aristotle's theories concerning tragedy.

Three hours, through the year. M. W. F., 9.

PROFESSOR BRACKETT

COURSES IN LATIN

1. PRIMARILY FOR UNDERGRADUATES

11. FIRST YEAR COURSE. This course is designed to give men who have never studied Latin an opportunity to learn some of the essentials of the subject in college. It is conducted entirely with reference to the needs of the average student and with emphasis on the practical usefulness of an acquaintance with Latin in everyday life. Indivisible course.

Open to Freshmen.

Three hours, through the year. M. W. F., 10.

PROFESSOR BRACKETT

12. CICERO, *de Amicitia*; CATULLUS, Selections; HORACE, Selections from the Odes. The year is about equally divided between the three authors. In connection with the work in Horace

and Catullus metrical translation is encouraged, and some of the more famous poems are committed to memory.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 11.

PROFESSOR BRACKETT

13a. PLAUTUS AND TERENCE. Ancient comedy, Greek and Latin, is discussed, and the writings of Plautus and Terence are compared.

Three hours, first semester.

Omitted in 1923-24.

14b. LETTERS OF PLINY; SELECTIONS FROM THE *Satires* AND *Epistles* OF HORACE, AND FROM JUVENAL. These authors are read with particular attention to the information the selections contain in regard to literary and social conditions under the empire.

Three hours, second semester.

Omitted in 1923-24.

15a. SELECTIONS FROM CÆSAR AND CICERO. This course is open to students who have had Latin 11 or its equivalent. The principal aim is to increase the student's ability to read Latin.

Three hours, first semester.

PROFESSOR BRACKETT

Omitted in 1923-24.

15b. SELECTIONS FROM OVID'S *Metamorphoses*.

Three hours, second semester.

PROFESSOR BRACKETT

Omitted in 1923-24.

DEPARTMENT OF BIOLOGY

ASSISTANT PROFESSOR RICE, ASSISTANT PROFESSOR SCHAEFFER

The courses in biological subjects are designed to meet the needs of four general classes of students.

The first class consists of students who desire to take Biology as a *minor* to supplement other courses or as a general culture subject. Such students may take Biology 11, 14, or 111, or the required number of hours selected from the other courses with regard to the special requirements of each.

The second class includes those who wish to prepare themselves to study Medicine or Sanitary Science. Students of this class should *major* in Biology or Chemistry. A *major* in Biology requires twenty-four semester hours, which, for pre-medical students, should include courses 11, 12, 13, and 15. The subjects pursued will then be General Biology, Vertebrate Anatomy, Embryology, Histology, and Physiology. Students preparing to take up the study of Sanitation should add to the pre-medical subjects course 18, which gives introductory training in Bacteriology.

The third class comprises those who intend to make Biology their profession, who wish to prepare themselves to teach the subject and to become skilled investigators. Such students are advised to select Biology as their *major* and should confer with the instructors in the department before determining their programs.

The fourth class includes those students having adequate preparation who desire to pursue research work in Biology. Opportunity is afforded for instruction, supervised experimental work, and also for independent investigation. The laboratories are equipped with the usual apparatus and materials for instruction and investigation in the biological subjects, and any additional equipment required for special purposes will be provided whenever possible. Conditions are especially favorable with regard to scientific literature. Complete files of nearly all of the important journals in Zoölogy, Physiology and Biological Chemistry are in the library, as well as a large number of special works in these and other branches of biological science.

COURSES IN BIOLOGY

1. PRIMARILY FOR UNDERGRADUATES

11. GENERAL BIOLOGY. This course is designed to serve as a practical introduction to more specialized biological courses, and aims to acquaint the student with the elementary forms, forces, and laws of living nature. Types for study are selected so far as possible from common animals and plants which may

be observed alive and functioning under natural conditions. Three lectures and one laboratory period per week.

Open to freshmen.

Three hours, through the year. M. W. F., 10; W. or F., 2.

ASSISTANT PROFESSOR RICE

12. **ELEMENTARY PHYSIOLOGY.** The fundamental properties of living matter, its composition, organization and behavior, followed by a consideration of the structure and functions of the human body. Biology 11 is prerequisite for this course. Three lectures and one laboratory period per week.

Three hours, through the year. M. W. F., 9; F., 2.

ASSISTANT PROFESSOR RICE

Omitted in 1923-24.

13. **COMPARATIVE ANATOMY OF VERTEBRATES.** A comparative study of the structure and development of the organs of vertebrate animals, including man, with minor references to the lower forms. This course is designed to meet the needs of prospective students of Medicine and those who intend to specialize in Zoölogy. The laboratory work consists of the dissection and study of selected examples of vertebrate animals together with assigned reading. Three lectures and one laboratory period per week.

Three hours, through the year. Tu. Th. S., 10; M., 2.

ASSISTANT PROFESSOR SCHAEFFER

14. **ELEMENTARY BOTANY.** This course is offered as an elective for all students and is designed to give a general knowledge of plant life and its relation to human welfare, and also to furnish a basis for further work in Botany. Three lectures and one laboratory period per week.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 9; Th., 2.

ASSISTANT PROFESSOR SCHAEFFER

15. **EMBRYOLOGY AND HISTOLOGY.** The cellular structure of organisms; the origin of the individual and its development from the egg to the adult; the problems of differentiation and the cytological evidence of heredity. The laboratory work includes an introduction to histological technique and the dissection and

study of the early stages of the frog, chick, and pig. Courses 11 and 13 are advised in preparation for this course. One lecture and two laboratory periods per week.

Three hours, through the year.

Omitted in 1923-24.

16. **ADVANCED PHYSIOLOGY** This course is designed to give a comprehensive knowledge of Animal Physiology. The student works out the chemical tests for food principles, digestive ferments, urine, water, and air analysis, and determination of hæmoglobin. Considerable time is also devoted to the experimental physiology of muscle, nerve, and sense organs, and of respiration and circulation. Three lectures and one laboratory period per week.

Three hours, through the year. M. W. F., 9; F., 2.

ASSISTANT PROFESSOR RICE

18. **BACTERIOLOGY.** The principles of Bacteriology and their application in Medicine, Sanitation, and various agricultural and industrial processes. The laboratory work includes training in general bacteriological technique, the isolation and study of pure cultures, and the bacteriological examination of water, milk, and sewage. Lectures and laboratory work.

Three hours, second semester.

Omitted in 1923-24.

111b. **GENETICS.** Theories of organic evolution; the principles of variation, selection, and heredity; the material basis of heredity; Mendelian inheritance and the application of its principles in animal breeding and eugenics. Lectures, assigned readings, and laboratory work, including experiments in animal breeding. Course 11 or 14a is advised in preparation for this course. Three lectures and one laboratory period per week.

Three hours, second semester. Tu. Th. S., 11.

ASSISTANT PROFESSOR SCHAEFFER

112a. **EVOLUTION.** The content of the course will include a consideration of the various conditions which led to the formulation of the doctrine of organic evolution, together with an analysis of the subsequent findings which have affected its validity. Attention will be paid to the philosophical and religious phases of

the historical development of the idea, and particular emphasis will be laid upon its present status and significance. Lectures, readings and reports.

Three hours, first semester. M. W. F., 11.

Since then they are in 1923-24.

ASSISTANT PROFESSOR RICE

DEPARTMENT OF CHEMISTRY

PROFESSOR MERIGOLD, PROFESSOR KRAUS, PROFESSOR WHITE,
MR. BERGSTROM

The instruction offered in Chemistry falls into two main groups:

First, courses intended primarily for undergraduates. These are designed for those students who wish to acquire the necessary foundation for professional work in Chemistry, for pre-medical students, and for those desiring some knowledge of the subject as part of their general education.

Second, courses intended primarily for graduates. These courses offer advanced instruction to students possessing the requisite foundation in Chemistry, Physics, and Mathematics, and afford training in the methods of chemical research. They lead ultimately to the advanced degrees.

UNDERGRADUATE WORK

Students who expect to make Chemistry a profession should *major* in Chemistry and should either take a *minor* in Physics or at least two years' work in that subject.

Students intending to study Medicine should take as much work in Chemistry as possible. Courses 11, 13, 15, and 19 or 110 are essential. Courses 14 and 18 should be included, if possible. In fact, the subject of Physical Chemistry, course 18, is even now required for admission to some of the medical schools and is almost equally essential with the courses before mentioned. Attention is called to the statement regarding pre-medical courses under the announcement of the Department of Biology.

The attention of all students intending to enter undergraduate courses in Chemistry is called to the matter of the laboratory fees and breakage deposits on page 24.

GRADUATE WORK

It is the purpose of the Department of Chemistry to provide the graduate student with that broad training in the fundamental principles of Chemistry which shall adequately equip him for a subsequent scientific career. A considerable number of the students entering this department for graduate work will naturally look forward to an academic career. It is not intended, however, to provide training for such men alone, for the equipment for technical research, whether for public or private interests, requires equally a thorough familiarity with the underlying principles of science and with the methods of experimental investigation. Whether a student shall devote himself to pure or to technical research is a matter of individual interest and inclination rather than of training. The purpose of the department is to provide the training on lines sufficiently broad to enable the student to exercise a choice between technical and purely scientific work.

It is intended that the list of courses primarily for graduate students will be covered in a period of three years.

The requisite preliminary training for the graduate courses includes Mathematics through Calculus, at least two years of work in Physics, and the standard undergraduate courses in Chemistry.

ADVANCED DEGREES AND RESEARCH

The requirements for advanced degrees cannot be met by the mere pursuit of a course of studies nor by the mere execution of a research. For this reason no definite course of graduate studies is outlined, but the student is expected to carry such courses as will enable him to acquire a comprehensive knowledge of the subject of Chemistry during the course of his residence at the University. In general, the courses of instruction and the research work are designed to enable a student to complete his training in a period of three years, provided, however, that he has the necessary preliminary training prior to undertaking his graduate work and that he possesses the necessary aptitude in his chosen field of work. Students who are not fully prepared for graduate work will be required to make up any deficiencies either before undertaking graduate work or while at the same time taking a limited amount of graduate work. In such cases

it is to be expected that the time necessary to obtain an advanced degree will be correspondingly extended.

All students registered for advanced degrees are expected to devote not less than thirty hours per week to laboratory work. In the case of a student working for a Master's degree a portion of his time may be devoted to special laboratory work in organic, inorganic, and physical Chemistry. In the case of students preparing for the Doctor's degree not less than thirty hours per week or five hours per day shall be devoted to research work under such conditions and regulations as may be prescribed by the Director.

Graduate scholarships and fellowships are available for students in this department. See page 45.

RESEARCH FACILITIES FOR MEN NOT CANDIDATES FOR DEGREES

The facilities of the graduate laboratories are open to such men as have the interest and the ability necessary for undertaking research on their own responsibility. Such men will, in general, already have received the Doctor's degree and will be interested primarily in research for its own sake. It is the purpose of the department to encourage men of this type whenever possible, and every facility will be afforded such investigators for the purpose of carrying out their investigations.

COURSES IN CHEMISTRY

1. PRIMARILY FOR UNDERGRADUATES

11. GENERAL CHEMISTRY. Chiefly inorganic. Systematic study of the elements and their principal compounds, and the fundamental laws and theories of Chemistry. Three lectures, and three hours of laboratory work per week.

Open to Freshmen.

Three hours, through the year. M. W. F., 11; M., 2.

PROFESSOR MERIGOLD

13. QUALITATIVE ANALYSIS. Basic and acid. Chiefly laboratory work, nine hours per week. Occasional lectures and recitations upon the theories involved.

Three hours, through the year. Tu. F., 2.

PROFESSOR WHITE

14. **QUANTITATIVE ANALYSIS.** Chiefly laboratory work, with occasional lectures, recitations, and problems. A carefully selected series of quantitative determinations, designed to give the student as wide a range as possible of typical methods of quantitative manipulation, both gravimetric and volumetric. Six hours of laboratory work, and one lecture per week. Open only to those who take or have taken course 13.

Three hours, through the year. Th., 3; Tu. Th., 4.

PROFESSOR MERIGOLD

15. **ORGANIC CHEMISTRY.** Systematic study of the compounds of carbon and their applications to the arts. Three lectures per week. Open to all who have taken course 11 or its equivalent.

Three hours, through the year. Tu. Th. S., 9.

PROFESSOR WHITE

16. (To be numbered 214, *q.v.*, in 1924-25.) **ADVANCED QUANTITATIVE ANALYSIS.**

18. **PHYSICAL CHEMISTRY.** Two lectures and three hours of laboratory a week, introducing the student to the principal chapters of modern chemical theory. To be admitted to this course, students must have passed Chemistry 11 and 14 and Physics 11. A knowledge of organic chemistry and calculus is desirable.

Three hours, through the year. W. F., 12; W., 2.

PROFESSOR MERIGOLD

19. **ORGANIC AND BIOLOGICAL CHEMISTRY.** This course covers the organic laboratory requirements for pre-medical students, and also includes such subjects of study as blood and urine analysis. Chemistry 15, prerequisite or to be taken concurrently. A knowledge of quantitative analysis is also desirable.

Three hours, through the year. M. Th., 2.

PROFESSOR WHITE

110. **ORGANIC SYNTHESIS AND ANALYSIS.** Laboratory work, consisting of the preparation of typical organic compounds, qualitative testing for the ordinary elements and organic groups, the quantitative determination of carbon, hydrogen, nitrogen,

and the halogens. Course 110 should be taken, if possible, in connection with course 15. The work of this course requires nine hours of laboratory work per week. It is advisable for the student to take or to have taken course 14.

Three hours, through the year. M. Th., 2.

PROFESSOR WHITE

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

212b. HISTORY OF CHEMISTRY. This course is intended to cover the historical development of the science. An attempt is made to give the student some knowledge of the individuality of the men whose work has resulted in the growth and development of modern Chemistry. Attention will be given also to the relation of Chemistry to other sciences at various periods of development.

Open to graduate students and seniors who take or have taken Chemistry 11 and 15 or equivalent courses.

Three hours, second semester. Tu. Th., 10.

PROFESSOR MERIGOLD

213a. ADVANCED ANALYTICAL CHEMISTRY. Special features of Analytical Chemistry, both practical and theoretical, including such topics as special analytical methods with particular reference to sources of error, limits of accuracy, and theoretical considerations; preparation of pure inorganic materials and methods of exact analysis required in atomic work and fields of research necessitating precise analysis. Particular attention is paid to results of recent investigation in this field. Open only to students who take, or have taken, courses 16 and 18, or their equivalent.

Three hours, first semester. F., 2.

PROFESSOR MERIGOLD

214. (Numbered 16 in 1923-24.) ADVANCED QUANTITATIVE ANALYSIS (including Gas Analysis). Open only to students who have taken course 14. This course is primarily intended for those who expect to specialize in Chemistry, and may also be taken with advantage by those who intend to study Medicine. The laboratory work will be varied, if desired, to meet the needs of individual students. Occasional lectures treat the subject sys-

Given as
112b
1923-24

tematically from both practical and theoretical standpoints. Laboratory work, nine hours per week.

Three hours, through the year. Tu., 3. PROFESSOR MERIGOLD
215. ADVANCED ORGANIC SYNTHESIS. In this laboratory course, newer methods of preparation are studied, and an original investigation is initiated.

Three hours, through the year. M. Th. 2.

Omitted in 1923-24.

PROFESSOR WHITE

3. PRIMARILY FOR GRADUATE STUDENTS

NOTE: Of the following courses listed as "Primarily for Graduate Students" only 312 will be offered in 1924-25.

31. THEORETICAL CHEMISTRY. The fundamental principles underlying the transformations of matter are developed and applied to systems of one component. The relations among the various coefficients are derived, and applications are made to real systems. The characteristic functions of Gibbs are introduced and illustrated, and the laws governing equilibria are derived from general principles. The conditions for equilibrium in systems under the action of external forces are derived and applied to various cases.

Lectures *twice a week*, conferences *once a week*, through the year. M. W., 11.

PROFESSOR KRAUS

32. THEORETICAL CHEMISTRY. A continuation of the preceding course, in which systems of more than two components are treated. The conditions for equilibrium are derived. The phase rule is derived, and its application to certain particular cases is discussed. The general equations for the energy and entropy of a mixture are derived. Applications are made to dilute solutions as well as to particular cases of concentrated solutions. The conditions for equilibrium are derived for systems in which reactions take place among various constituents present. The equilibria in the case of gaseous reactions, both homogeneous and heterogeneous, are treated, and the Nernst Heat Theorem is developed and discussed. Lectures and conferences.

Twice a week, through the year. Tu., 11. PROFESSOR KRAUS

33. ADVANCED INORGANIC CHEMISTRY. Instead of treating the subject from the standpoint of the relation of elementary

substances in the periodic table, various substances are classified according to their properties. There are thus considered: 1, elementary substances; 2, metallic substances, including elements and compounds; 3, salts, including electrolytes generally; 4, non-saltlike substances, including a brief description of the properties of carbon compounds. This is followed by a study of various typical reactions, such as oxidation and reduction reactions, reactions at high temperatures, and reactions in non-aqueous solutions. This course is intended to extend over a period of from two to three years. Lectures and conferences.

Once a week, through the year. M., 9. PROFESSOR KRAUS

34. THE PHASE RULE. One component and the simpler two component systems are treated during the first year, and three component and the more complex two component systems are treated in the second year. The subject is treated as exhaustively as time permits. *Roozeboom* serves as a general text and is supplemented so far as possible by references to the original literature. Seminar extending over a period of two years.

Once a week. Tu., 9. PROFESSOR KRAUS

35a. EQUILIBRIA IN MIXTURES OF ELECTROLYTES. The properties of mixtures of electrolytes are discussed, and the reactions in such mixtures are considered. These include, among others, hydrolytic reactions, as well as other ionic reactions, in which new phases may or may not appear. Lectures and conferences.

Once a week, first semester. PROFESSOR KRAUS

Omitted in 1923-24.

310a. THE CHEMISTRY OF THE RADIOACTIVE ELEMENTS. Lectures dealing with the general properties of radioactive substances, followed by a discussion in more detail of the three disintegration series with special reference to the chemical side and to the arrangement of the radioactive elements in the periodic table.

Once a week, first semester. Th., 9. DR. BERGSTROM

311b. THEORIES OF ATOMIC STRUCTURE. A discussion of some of the more important theories of the structure of the atom.

Once a week, second semester. Th. 9. DR. BERGSTROM

312. **ADVANCED ORGANIC CHEMISTRY.** Conferences are held at which the fundamental conceptions and problems of organic chemistry are dealt with in a systematic manner. Current literature, applicable to the subjects under discussion, is reviewed.

Once a week, through the year. W., 9. PROFESSOR WHITE

314. **RESEARCH CONFERENCE.** By the staff of the Department of Chemistry. The work in progress in the laboratory is discussed in detail. Reports are expected to be made by all students engaged in research at least twice a year, and perhaps oftener.

Once a week, through the year.

DEPARTMENT OF ECONOMICS AND SOCIOLOGY

PROFESSOR BRANDENBURG, ASSISTANT PROFESSOR MILLER

The attention of students looking forward to a business or professional career is especially directed to the courses in Economics. These courses are intended to give the student an understanding of the economic structure of society and of its functioning, and also to train him in the critical analysis of economic problems. They aim to prepare the student primarily for the place of enlightened leadership which the community rightfully expects the college-bred man to assume. At the same time they seek to fit him for grappling with the broader problems that confront the business man. No attempt is made to teach the narrow application of principles to technique with a view to preparing men for specific positions in business life. Such work belongs properly to the more technical schools of business administration and may most profitably be taken only after the general principles have been mastered.

The courses in Sociology give training for citizenship with rather less direct bearing upon business. These courses attempt to give some understanding of the complex forces and principles underlying the human relationships which grow out of our intricate social organization. Only as these forces and principles are better understood can we expect constructive suggestions and intelligent guidance for future social growth.

Economics and Sociology are most happily associated, whether as *major* or *minor* subjects, with work in the departments of History and International Relations, Geography and Geology in their more economic aspects, Psychology, and English. Other combinations are not undesirable. For example, one equipping himself for industrial chemistry might well choose Economics for his *minor* subject.

Economics 11 is a prerequisite to all other courses in Economics, with the possible exception of 14a and 14b. Sociology 11 is a prerequisite to further work in Sociology. Undergraduates *majoring* or *minoring* in either branch of the department are urged to take the introductory course in their Sophomore year; only under unusual circumstances should they postpone it until their Junior year. Students may not begin work in this department before their second year, except with the special consent of the instructor.

A sufficient range of courses will be offered in cycles of two or three years so that graduate students may be adequately prepared for candidacy for the doctorate in this department. The classification of courses as undergraduate, intermediate, and graduate is necessarily an elastic one. Graduate students electing courses in the intermediate category will be required to do additional reading; undergraduate students in courses of the second group will be expected to do work of substantially graduate caliber.

The attention of students in Economics and Sociology is directed also to closely allied courses offered in the Departments of Geography, History and International Relations, Geology and Psychology.

Department of Geography:

- 12b. ECONOMIC GEOGRAPHY.
- 21a. ECONOMIC GEOGRAPHY OF NORTH AMERICA.
- 22b. ECONOMIC GEOGRAPHY OF SOUTH AMERICA.
- 23b. AGRICULTURAL REGIONS OF THE UNITED STATES AND CANADA.
- 34b. LAND UTILIZATION IN UNITED STATES.

Department of Geology:

- 122. ECONOMIC GEOLOGY.

Department of History and International Relations:

27. LATIN AMERICA.

Department of Psychology:

202. SOCIAL AND ETHNIC PSYCHOLOGY.

COURSES IN ECONOMICS

1. PRIMARILY FOR UNDERGRADUATES

11. PRINCIPLES OF ECONOMICS. An introduction to the fundamental economic principles, together with a study of the practical application of these principles in the problems of American life. Freshmen may be admitted to this course only under exceptional circumstances, and with the express consent of the instructor.

Three hours, through the year. Tu. Th. S., 12.

PROFESSOR BRANDENBURG AND ASSISTANT PROFESSOR MILLER

12. LABOR PROBLEMS. A study of labor organizations; the aspects of labor questions as reflected in labor legislation; the labor of women and children or other special classes; minimum wage, social insurance; employers' associations, the selection and training of workers, labor turn-over, welfare work, shop committees, profit-sharing and similar questions.

Three hours, through the year. Tu. Th. S., 11.

PROFESSOR BRANDENBURG

13. (To be numbered 23, *q. v.*, in 1924-25). MONEY, BANKING AND THE BUSINESS CYCLE.

14a. ECONOMIC HISTORY OF WESTERN EUROPE. The development of European industry and commerce since the Industrial Revolution. This course may advantageously be taken as an introduction to Economics 14b; it may, with the consent of the instructor, be elected concurrently with Economics 11.

Three hours, first semester. M. W. F., 9.

ASSISTANT PROFESSOR MILLER

14b. ECONOMIC HISTORY OF THE UNITED STATES. The economic progress of the United States from the Colonial period to the present. Such topics as the following will be discussed: economic life in the colonies; the development of agriculture and

manufactures; changes in the forms of transportation; domestic and foreign commerce; tariff policy; banking, currency and public finance; problems of industrial combination. This course, may, with the consent of the instructor, be elected concurrently with Economics 11.

Three hours, second semester. M. W. F., 9.

ASSISTANT PROFESSOR MILLER

16b. STATISTICS. Methods of collecting, utilizing and presenting statistical data, with special reference to economic statistics. Text-book, lectures and problem work.

Three hours, second semester. ASSISTANT PROFESSOR MILLER
New course, to be offered in 1924-25.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS.

21. (To be numbered 31, *q. v.*, after 1923-24). INTERNATIONAL ECONOMIC POLICIES.

23. (Numbered 13 in 1923-24). MONEY, BANKING AND THE BUSINESS CYCLE. The principles of money and banking, with special reference to their functions in the present economic organization of society. History and money and banking in the United States and Western Europe. The Federal Reserve system will be considered in some detail. Foreign exchange, organized speculation in its relation to the money market, and the business cycle are included in the subject matter of the course.

Three hours, through the year. M. W. F., 11.

ASSISTANT PROFESSOR MILLER

25a. PUBLIC FINANCE. A study of the principles of public revenues, expenditures and debts, with particular reference to American conditions.

Three hours, first semester.

PROFESSOR BRANDENBURG

Omitted in 1923-24.

27a. INTERNATIONAL TRADE AND INTERNATIONAL FINANCE. A study of the theory and economic bases of international trade;

the financing of foreign trade; the methods of making foreign payments; international banking.

Three hours, first semester. ASSISTANT PROFESSOR MILLER
Omitted in 1923-24.

28a. (To be numbered 38, *q.v.*, in 1924-25). HISTORY OF ECONOMIC THOUGHT.

28b. CORPORATION FINANCE. The organization of a corporation; the problem of capitalization; the financial plan; corporate securities; the management of corporate income; receivership and reorganization.

Three hours, second semester. ASSISTANT PROFESSOR MILLER
New course to be offered in 1924-25.

29b. ECONOMIC THEORY. (To be numbered 39 *q.v.*, in 1924-25 and offered as a full year course under the title "Value and Distribution.")

Three hours, second semester. ASSISTANT PROFESSOR MILLER

210b. SOCIALISM AND SOCIAL REFORM. The historical and economic background of reform movements; socialism as a criticism of the system of the classical economists and of existing institutions, as a theory of social progress, and as a program of social reform; other plans and projects for economic reconstruction.

Three hours, second semester. PROFESSOR BRANDENBURG
Omitted in 1923-24.

3. PRIMARILY FOR GRADUATE STUDENTS

31. (Numbered 31 in 1923-24). INTERNATIONAL ECONOMIC POLICIES. National tariff policies or other commercial restrictions with the international problems arising therefrom; national, private or public establishments for the promotion of foreign trade; banking and credit facilities as factors in foreign trade; commercial treaties; navigation laws and general maritime policies of important commercial nations.

Two or three hours, through the year.

PROFESSOR BRANDENBURG

38. (Numbered 28a in 1923-24.) HISTORY OF ECONOMIC THOUGHT. The development of economic thought from classical antiquity to J. S. Mill (1848).

Three hours, through the year. Tu. Th. S., 8.

ASSISTANT PROFESSOR MILLER

Given as 28a in the first semester, 1923-24.

39. (Numbered 29b in 1923-24, and offered as a second semester course). VALUE AND DISTRIBUTION. An advanced course in economic theory, involving a critical reading of Ricardo, J. S. Mill, and representative modern economists. Intended to trace the progress of economic thought since the early part of the nineteenth century and to train the student in critical consideration of economic principles. The course is conducted mainly by discussion, in which the students are expected to take an active part.

Three hours, through the year.

ASSISTANT PROFESSOR MILLER

311. SEMINAR IN ECONOMICS AND SOCIOLOGY. Round-table meetings are held fortnightly in the evening for presentation of the results of investigation by members of the Seminar. As occasion offers, other persons are invited to address the Seminar on matters of general interest.

All graduate students in the department are expected to attend. Seniors *majoring* in Economics and Sociology are urged to do so.

PROFESSOR BRANDENBURG AND ASSISTANT PROFESSOR MILLER

COURSES IN SOCIOLOGY

1. PRIMARILY FOR UNDERGRADUATES

11. PRINCIPLES OF SOCIOLOGY. Origin of human society; factors which have affected progress and determined present social structure; forces, principles, and processes now operative in society; a summary view of insistent social problems; the possibility of intelligent guidance of future development.

Three hours, through the year.

Omitted in 1923-24.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

22. SOCIAL PATHOLOGY. An examination of the causes and nature of dependency, defectiveness, and delinquency; the prob-

lems associated with, or arising out of, the presence of these classes in society; methods advocated or used for the prevention or amelioration of these conditions.

Three hours, through the year.

Omitted in 1923-24.

See also Economics 12, LABOR PROBLEMS; Economics 210b, SOCIALISM AND SOCIAL REFORM.

3. PRIMARILY FOR GRADUATE STUDENTS

31. SOCIOLOGY SEMINAR. A first-hand study of private and public institutions of Worcester City and County devoted to welfare, charitable, or correctional work; studies of local population growth and racial composition; social relations between the urban community and adjacent rural regions. [The exact content of this course is determined from year to year by the *major* interests, preparation, and experience of the students registering.]

One to three hours, through the year.

Omitted in 1923-24.

See also Seminar in Economics and Sociology, page 92.

DEPARTMENT OF EDUCATION AND SCHOOL HYGIENE

PROFESSOR BURNHAM, PROFESSOR SANFORD

The work of this department is in the closest connection with that in the Department of Psychology and largely based upon it. The aim is to give all students, both undergraduates and graduates, the opportunity for an introduction to the subject of Education as a universal culture interest; and provision for the significant aspects of Education in the school and the community. Among those who plan to become teachers it aims also to develop professional interests and to give knowledge of sound principles and methods and of the best educational literature, as a preparation for practical school work.

GRADUATE WORK

To graduate students the department gives the opportunity for research in the problems of genetic pedagogy, child hygiene, mental hygiene, and the large problems of education in relation

to industry and society. The department offers courses leading to the degrees of Master of Arts and Doctor of Philosophy.

The work in this department is intended to meet the needs of the following classes of students:

First. Those intending to teach some other specialty but who wish a general survey of the history, present state, methods, and recent advances in the field of university, professional, and technical education.

Second. Those who desire to become professors of Pedagogy, heads or instructors in normal schools, superintendents, medical inspectors, or otherwise to become experts in the work of education.

Third. Those who wish to become students of the great problems of education and hygiene in relation to industrial and social development.

Courses in Psychology are open to properly qualified students in this department, and it is expected that those who have not had extended training in Psychology will take suitable courses in this subject.

THE DEPARTMENTAL LIBRARY

The library of the department has a large collection of educational literature, being especially rich in German and French literature. Many of the more common educational books are accessible in the Worcester Public Library and have not been duplicated by the University. The large collection of text-books in the library of the American Antiquarian Society and its valuable historical material are also accessible to the University students.

The collection of educational periodicals includes a large number of the best foreign journals—English, French, German, etc.

THE EDUCATIONAL MUSEUM

The nucleus of an Educational Museum has been formed. This contains a valuable collection of educational apparatus, pictures, illustrative material for language and *Anschaun-
ungsunterricht*, kindergarten material, maps, charts, diagrams, text-books, lantern slides, photographs, and illustrative material of various kinds in School Hygiene, History, Arithmetic,

Language, the Natural Sciences; apparatus for the teaching of Arithmetic, abacuses of various kinds, charts for counting, reckoning machines, number tablets, weights, measures, geometrical models; toys from different countries, a number illustrating scientific principles in Physics, and the like. The collection includes samples of the latest hygienic seats and desks made under the direction of the Posture League; and the set of over fifty charts on School Health in the United States prepared by the Committee on School Health of the National Council of Education and the American Medical Association. This museum is located on the top floor of the Main building.

1. PRIMARILY FOR UNDERGRADUATES

No courses announced.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

23. PRINCIPLES OF EDUCATION. This course treats certain fundamental educational principles and involves an historical study of several important chapters in Education. Such topics as the following will be included. Educational ideals. The interrelation of educational aims. The dominant aim at different stages of development. The correlation of educational forces. The family and education. The church and education. State aid and control. The scientific method in education. Antithetic educational principles. The history of nature vs. convention in education. Individualism vs. collectivism. The manifestation and influence of these educational ideals as illustrated in England, France, and Germany before the war and tested by the war. The present opportunity in education and the problems of educational reform and reconstruction. This course is primarily for graduates but with the consent of the instructor may be taken by undergraduates who have had a sufficient preparation in Psychology. One lecture per week.

One hour (or two hours, with a prescribed reading), through the year. S., 10.

PROFESSOR BURNHAM

To be omitted in 1924-25.

28. THE TEACHING PROFESSION. The evolution of the teacher's calling. The teaching body as a social group in relation to other economic and social groups. The social function

of the teacher. Characteristics of the teaching body as a social group. The teacher and the parent. The teacher and the artisan. The teacher in the countries of antiquity, in China, India, Greece, Rome, etc. The medieval teacher. The teachers of the early Renaissance. The great schoolmasters of the Reformation. The reformers, Comenius, F. A. Wolfe, Pestalozzi, et al. The teaching profession in Germany. Fundamental principles concerning the training of teachers. The normal schools. The hygiene of teaching.

One hour (or two, with prescribed reading), through the year.

PROFESSOR BURNHAM

Omitted in 1923-24.

See also Psychology 201, EDUCATIONAL PSYCHOLOGY, page 116.

3. PRIMARILY FOR GRADUATE STUDENTS

34. HIGHER EDUCATION IN THE UNITED STATES. After an historical survey of the influences which have molded higher education in this country, the demands of the present day upon institutions of higher learning will be analyzed and methods of meeting them considered. Especial attention will be given to the distinguishing characteristics of college and university students and the needs peculiar to their stages of development.

One lecture and one conference period per week, through the year.

PROFESSOR SANFORD

Omitted in 1923-24.

36. HYGIENE OF THE SCHOOL CHILD. This course has been given in alternate years with the course on the Hygiene of Instruction. Some of the more important chapters in modern school hygiene will be considered, including such topics as: The conditions that determine growth and development, physiological age, the physical and mental differences between children and adults, the general principles of somatic and mental hygiene, the hygiene of the senses, modern studies of defects of sight and hearing, school diseases, the hygiene of the voice, the mouth, the teeth, the nose. Tests of ability to work and of physical condition. Medical inspection. The development of habits of

healthful mental activity. The hygienic aspects of recent psychological studies.

Lectures *one hour per week*, through the year. Tu., 10.

PROFESSOR BURNHAM

To be omitted in 1924-25.

37. THE HYGIENE OF INSTRUCTION AND THE PRINCIPLES OF MENTAL HYGIENE. The topics considered include: The significance of stimulation in the development of the nervous system, the development of associated stimuli and conditioned reflexes. The conditions of efficient brain activity. The general principles of mental hygiene. The effects of drug stimuli, alcohol, tobacco, caffeine, and the like. Fatigue. The period of study. Recesses. The optimum conditions of school work. The hygienic aspects of examinations, discipline, and punishment. The relations of discipline to mental hygiene. The hygiene of different subjects of school instruction.

One hour per week, through the year. PROFESSOR BURNHAM

Omitted in 1923-24.

39. SEMINAR. The work is determined largely by the needs of the students who take this course. It is expected that each member of the seminar will elect some subject for special investigation, either in the field of Education or School Hygiene. A coöperative method is used so that each student may profit by the work of all of the others.

One and a half or two hours per week, through the year. Th., 3.

PROFESSOR BURNHAM

DEPARTMENT OF ENGLISH

PROFESSOR AMES, PROFESSOR DODD

Prescribed work in English consists of English 11, required of all Freshmen, and six semester hours in English Literature, required of all students, to be completed by the end of the Sophomore year. A *major* in English consists of twenty-four semester hours, including English 11; a *minor* of eighteen semester hours, including English 11.

COURSES IN ENGLISH

1. PRIMARILY FOR UNDERGRADUATES

11. ENGLISH COMPOSITION. The course aims through con-

stant practice in composition and the reading of literature to give the student greater facility in written expression.

Required of Freshmen.

Three hours, through the year. Tu. Th. S., 11 or 12.

PROFESSOR DODD

13a. SHAKESPEARE. A general survey of Shakespeare's works, including the reading and class discussion of twenty plays.

Three hours, first semester. Tu. Th. S., 11. PROFESSOR AMES

16a. ENGLISH COMPOSITION. Weekly themes in exposition, the editorial, the informal essay and narrative. Open to students who have completed English 11.

Three hours, first semester. M. W. F., 11. PROFESSOR AMES

17a. DRAMATIC EXPRESSION. A course designed to aid the student in developing powers of dramatic expression.

Three hours, first semester. M. W. F., 9. PROFESSOR DODD
Omitted in 1923-24.

18b. THE BIBLE. This course aims to stimulate an intelligent appreciation of the Bible as literature. It consists of an interpretation chiefly of the Old Testament, its history and epic, poetry and oratory, philosophy and prophecy.

Three hours, second semester. PROFESSOR AMES
Omitted in 1923-24.

19b. ENGLISH LITERATURE FROM THE REIGN OF QUEEN ANNE TO THE ACCESSION OF QUEEN VICTORIA. An introduction to the literature of the period between 1700 and 1830, with readings from Addison, Steele, Defoe, Swift, Pope, Fielding, Sterne, Johnson, Boswell, Goldsmith, Burke, Burns, Wordsworth, Coleridge, Byron, Keats, Shelley, Scott.

Three hours, second semester. Tu. Th. S., 10.

PROFESSOR AMES

110b. NINETEENTH CENTURY POETRY. A brief study of the works of Tennyson and Browning, with collateral reading in other poets of the nineteenth century and in the more notable poets of the present.

Three hours, second semester. M. W. F., 11.

PROFESSOR AMES

111. AMERICAN LITERATURE. Readings in American Literature, from the Colonial period to the present day. The course may be elected for the year or for the first semester only.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 12.

PROFESSOR AMES

112. NINETEENTH CENTURY ESSAYS. Among the essayists read are Lamb, De Quincey, Macaulay, Carlyle, Emerson, Thoreau, Mill, Ruskin, Arnold, Newman, Pater, Huxley, John Fiske. Opportunity is given for appropriate collateral reading in fiction and poetry, and in essayists of the present day. The course may be elected for the year or for the first semester only.

Three hours, through the year. M. W. F., 10.

PROFESSOR AMES

113b. MODERN DRAMA IN ENGLISH. A study of contemporary American, English and Continental dramatists.

Three hours, second semester. Tu. Th. S., 10.

PROFESSOR DODD

121a. BIOGRAPHY AND LETTERS SINCE 1900. A study of the biography, autobiography and correspondence of distinguished authors, together with painters and sculptors, from the eighteenth century to the present day.

Three hours, first semester. Tu. Th. S., 10. PROFESSOR DODD

122b. VERSIFICATION. A study of the verse and verse forms of the twentieth century. The course is especially designed to afford also frequent practice in verse composition.

Three hours, second semester. M. W. F., 9.

PROFESSOR DODD

DEPARTMENT OF GEOGRAPHY

A complete statement of the aims and the scope of the courses in Geography and the related subjects, Physiography, Meteorology, and Climatology, will be found in the announcement of the Graduate School of Geography, on Pages 52-66.

DEPARTMENT OF GEOLOGY

PROFESSOR LITTLE

1. PRIMARILY FOR UNDERGRADUATES

12. GENERAL GEOLOGY. First semester. A study of the

rocks which compose the earth's surface, the physical processes which act on them and an interpretation of the land forms which result from this modification. The structure of the earth is also studied and the practical applications indicated.

Second semester. The geological history of the earth including the geography of the past and the evolution of life as interpreted through the study of rocks and fossils.

Two recitations and laboratory period weekly. Occasional field trips. Indivisible course.

Three hours, through the year. M. W. F., 8; F., 2.

PROFESSOR LITTLE

122. ECONOMIC GEOLOGY. About one half of the first semester is occupied with an elementary study of crystallography, mineralogy and blowpipe analysis. The remainder of the year is spent in a study of the origin of the deposits of useful minerals and a discussion of the world's more important occurrences. Special attention is given to the distribution and control among the various countries of nonmetallic substances such as coal, petroleum, and phosphates; and metallic substances such as iron, copper, and gold. Elementary Chemistry and Geology desirable. Two class meetings and one laboratory period weekly. Indivisible course.

Three hours, through the year. M. W. F., 11.

PROFESSOR LITTLE

DEPARTMENT OF GERMAN

PROFESSOR RANDOLPH

German 12, or French 12, or the equivalent of one of these (see the statement of general requirement in foreign language, page 40), is required of all students who entered the College earlier than September 1921.

COURSES IN GERMAN

1. PRIMARILY FOR UNDERGRADUATES

11. ELEMENTARY GERMAN. Drill in pronunciation and grammar; composition; reading of easy prose.

Open to Freshmen.

Three hours, through the year, Tu. Th. S., 9.

PROFESSOR RANDOLPH

12. SECOND YEAR GERMAN. Review of grammar, with com-

position; the reading of several easy pieces of modern prose. The course is a continuation of German 11.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 12.

PROFESSOR RANDOLPH

15b. GERMAN CLASSICS. Lessing and Goethe. One or more plays of each of these authors; lectures or discussions, with collateral reading, dealing with their lives, writings, and influences.

Prerequisite, German 12 or its equivalent.

Three hours, second semester. Tu. Th. S., 11.

PROFESSOR RANDOLPH

16a. SCIENTIFIC GERMAN. Lassar-Cohn, *Die Chemie im täglichen Leben* is employed as a text-book. The course is designed especially for men *majoring* in science, but the subject matter includes much of interest to the casual student. Prerequisite, the first semester of German 12 or its equivalent.

Open to Freshmen.

Three hours, first semester. Tu. Th. S., 11.

PROFESSOR RANDOLPH

18. ADVANCED READING AND CONVERSATION. The course takes up through the medium of suitable German texts a variety of topics designed to acquaint the student with essential facts about Germany and the German people. About a third of each recitation hour is devoted to conversation in German. Open to students who have had at least three years of work in the language.

Three hours, through the year.

Omitted in 1923-24, and not to be offered in 1924-25.

DEPARTMENT OF HISTORY AND INTERNATIONAL RELATIONS

PROFESSOR BLAKESLEE, PROFESSOR DENNIS, PROFESSOR BRACKETT,
ASSISTANT PROFESSOR LANGER

UNDERGRADUATE WORK

The aim of the department in its undergraduate work is to give in its several courses a broad knowledge of the more significant aspects of the growth of the leading countries of the world.

This includes the study not only of the important facts, but more especially of the processes of development in government, diplomacy, society, business, religion, science, and education. The courses are not limited to a consideration of Europe and the United States, but include the progress and present-day conditions of the leading countries of South America, Asia, and Africa. While the work is designed primarily to give a cultural knowledge of general world affairs, many of the courses are of especial value to those who are preparing to teach, or to enter the field of law, theology, social service, or government.

Course 11, primarily for Freshmen, is open to members of all classes; courses 13, 16, 19 are elective for all; courses 15 and 16 are open to Sophomores, Juniors and Seniors.

GRADUATE WORK

The distinctive feature of the graduate work is the emphasis it places upon the various aspects of International Relations. Without neglecting investigation in the economic, political, and social life of preceding centuries, it makes an especial study of the problems and the difficulties constantly arising in the international relations and diplomacy of the family of states. The field includes not only the United States and the nations of Europe, but also the newer and rapidly developing states of Asia, Latin America, and Africa.

FELLOWSHIPS IN HISTORY AND INTERNATIONAL RELATIONS

A Fellowship in American History, known as the American Antiquarian Society Fellowship, has been established by members of the American Antiquarian Society. It has an annual value of three hundred dollars in addition to remission of tuition fees.

The subject of research chosen by the Fellow for his Doctor's dissertation should be selected within the field of American History before 1880, the period in which the Library of the American Antiquarian Society is of greatest assistance to historical investigators. In addition to the society's valuable manuscripts of the Colonial period, it has an unequalled collection of books printed in America in the early period and of American newspapers from 1660 to 1860.

Regular University Fellowships and Scholarships are also available for students in this department.

THE DOCTORATE

The various courses offered in the department are so arranged, in cycles of two or three years, that students working for their doctorate will be enabled to secure a full program each year. Those taking History as a *major* are advised to elect their *minor* either in Geography or in Economics. In addition to the regular courses, a feature of the method of instruction in the department is the frequent informal conferences between instructor and student.

The following courses in related departments are closely connected with work in History, and may advantageously be taken to supplement major work in the Department of History and International Relations.

Department of Geography

- 11a. THE ELEMENTS OF GEOGRAPHY.
- 12b. ECONOMIC GEOGRAPHY.
- 15a. INFLUENCE OF GEOGRAPHY ON AMERICAN HISTORY.
- 21a. ECONOMIC GEOGRAPHY OF NORTH AMERICA.
- 22b. ECONOMIC GEOGRAPHY OF SOUTH AMERICA.
- 32a. GENERAL PRINCIPLES OF ANTHROPOGEOGRAPHY.
- 33a. THE GEOGRAPHY OF THE MEDITERRANEAN REGION.
- 35a. GEOGRAPHY OF EUROPE.
- 36a. THE GEOGRAPHY OF EASTERN ASIA.

Department of Economics and Sociology

- 14a. ECONOMIC HISTORY OF WESTERN EUROPE.
- 14b. ECONOMIC HISTORY OF THE UNITED STATES.
- 27a. INTERNATIONAL TRADE AND INTERNATIONAL FINANCE.
- 31. INTERNATIONAL ECONOMIC POLICIES.

Department of Psychology

- 202. SOCIAL AND ETHNIC PSYCHOLOGY.

COURSES IN HISTORY AND INTERNATIONAL RELATIONS

1. PRIMARILY FOR UNDERGRADUATES.

- 11. MEDIEVAL HISTORY. The course covers the period from

the fall of Rome to the French Revolution, and serves as a general introduction to further historical study. The aim is to give a clear and accurate picture of the life and of the great movements of the mediæval and early modern period.

Open to freshmen.

Three hours, through the year. M. W. F., 9.

PROFESSOR BLAKESLEE AND ASSISTANT PROFESSOR LANGER

15. HISTORY OF ENGLAND FROM THE 15TH CENTURY TO THE PRESENT. A general course open to sophomores, juniors and seniors. Lectures, textbook, collateral reading, and quizzes. The purpose is to discuss the life of Englishmen at home, in relation with the Continent, and in the Empire.

Three hours, through the year. M. W. F., 9.

PROFESSOR DENNIS

16. EUROPE SINCE 1815. A general introductory survey of the history of central Europe from the end of the Napoleonic period to the present time. The lectures will cover the development of democracy and nationalism, the growth of modern imperialism and the partition of Africa, as well as the industrial revolution and the consequent spread of Socialism. Emphasis will be laid on the causes and course of the World War and on the present situation in Europe.

Not open to Freshmen.

Three hours, through the year. Tu. Th. S., 11.

ASSISTANT PROFESSOR LANGER

19. HISTORY OF GREECE AND ROME. The first semester is devoted to the history of Greece, the second to the history of Rome. The course aims to place the principal emphasis upon the characteristic elements of these civilizations and the contributions which they made to modern civilization. The course is conducted by the use of a text-book, by assigned readings, lectures and discussions.

Open to Freshmen.

Three hours, through the year.

PROFESSOR BRACKETT

Omitted in 1923-4.

2. FOR GRADUATES AND ADVANCED UNDERGRATES.

20. A SURVEY OF INTERNATIONAL RELATIONS. The course

will give a general survey of the whole field of international relations and furnish a foundation for further and more specialized work. It will consider the chief factors involved in this study, such as race, nationality, historical tradition, population, boundaries, economic resources, and imperialism; and present an outline of the important concrete problems of the world at the present time.

Two hours, through the year.

PROFESSOR BLAKESLEE

New course, not to be offered before 1925-26.

21a. BRITISH INDIA. A survey of European rivalry in India, the work of the East India Company, the development of administration by the crown, and the recent developments toward self-government. Economic relations with Europe, military history, the expansion of Indian relations with other parts of the world, immigration, and religious and revolutionary movements are among the topics considered.

Two hours, first semester. M. W., 4.

PROFESSOR DENNIS

Omitted in 1923-4.

21b. SELECTED TOPICS IN MODERN DIPLOMATIC HISTORY. Lectures and research work in various fields and world diplomacy. Among the topics which may be included are Anglo-French relations, the Near East, the diplomatic history of the Mediterranean basin, the partition of Africa, and Anglo-Russian relations.

Two hours, second semester, M. W., 3.

PROFESSOR DENNIS

Omitted in 1923-4.

22. THE FAR EAST. The course deals especially with Japan, China, and Russia in Asia, stressing foreign affairs, government and politics, and economic, industrial and commercial conditions. A careful study is made of the relations, diplomatic and commercial, with the United States, and of the results of the Washington Conference on the Limitation of Armament.

Three hours, through the year. M. W. F., 10.

PROFESSOR BLAKESLEE

Given in 1923-24 in the first semester only. To be omitted in 1924-25.

23. CENTRAL EUROPE IN THE 19TH CENTURY. This course is concerned chiefly with Germany and Austria-Hungary. After

a few introductory lectures the problem of German unity will be taken up in detail. The second semester will be devoted to the treatment of German supremacy after 1870, to the economic development of the German Empire, and to the national movements as well as to the foreign policy of Austria-Hungary. Special attention will be given to the present situation and problems of Central Europe.

Three hours, through the year, Tu. Th. S., 10.

ASSISTANT PROFESSOR LANGER

Omitted in 1923-4.

24. THE EXPANSION OF EUROPE. The introductory lectures will reach back to the age of discovery and trace the story of the early colonial empires of Spain, England and France. Chief stress will be laid on the results of the industrialization of Europe, the spread of European trade and culture to the unoccupied parts of the world, the rise of the second French colonial empire, the partition of Africa, the expansion of Russia and the opening of the Far East.

Three hours, through the year. ASSISTANT PROFESSOR LANGER
Omitted in 1923-24, and to be omitted in 1924-25.

25. NATIONALISM AND IMPERIALISM. A study of the origin and growth of the nationalist idea in Europe—the unification of Italy and Germany and the struggles for national expression in Austria-Hungary and Russia. On the other hand, the course aims to explain the origin and development of modern imperialism, the scramble for colonies and the underlying economic causes of the World War.

Three hours, through the year.

ASSISTANT PROFESSOR LANGER

Omitted in 1923-24, and to be omitted in 1924-25.

27. LATIN AMERICA. A survey of the history of the various Latin American countries is followed by a consideration of international diplomacy, political problems, systems of government, race questions, economic and industrial conditions. Emphasis is placed upon the relations, both in trade and diplomacy, with the United States. Present problems are stressed, such as the Monroe Doctrine, Pan-Americanism, the Mexican issue, the

American administration of Haiti and Santo Domingo, and the recent Santiago Conference.

Three hours, through the year, M. W. F., 10.

PROFESSOR BLAKESLEE

Omitted in 1923-24.

28a. NAPOLEON BONAPARTE. The career of Napoleon, with emphasis upon international relations, including colonial policy, and the influence of Napoleon on world politics.

Two hours, first semester. M. W., 4. PROFESSOR DENNIS

To be omitted in 1924-25.

28b. THE RECENT HISTORY OF THE BRITISH EMPIRE. An analysis of the British Imperial Possessions, emphasizing the developments and problems of the last quarter of a century.

Two hours, second semester. M. W., 3. PROFESSOR DENNIS

To be omitted in 1924-25.

29. RUSSIA AND THE NEAR EAST IN THE 19TH CENTURY. The aim of this course is not only to trace the development of Russia's policy in relation to the Near Eastern Question, but to study the general problem of the decline of the Ottoman Empire and the use of the Balkan States, as well as the growth of the revolutionary movement in Russia. The course of events since 1914—the Revolution and the Bolshevik régime in Russia, and the recent National revival in Turkey, will be particularly emphasized.

Three hours, through the year.

To be omitted in 1924-25. ASSISTANT PROFESSOR LANGER

3. PRIMARILY FOR GRADUATE STUDENTS

31a. INTERNATIONAL LAW. A general course adapted for graduate students who will do a large amount of independent reading. The principles of international law are presented and then illustrated by recent and pending international controversies of a legal nature. Lectures, text books, class discussions, and the study of the important cases in standard collections.

Two hours, first semester. M. W., 3.

PROFESSOR BLAKESLEE

Given in the first semester only of 1923-24. Usually given through the year.

To be omitted in 1924-25.

32. RECENT INTERNATIONAL RELATIONS OF THE UNITED STATES. A lecture and research course covering the period from the Civil War to the present, with emphasis upon American foreign policies during and since the World War. Especial consideration is given to the history and present status of American relations with Great Britain, Germany and France; the Monroe Doctrine; the Caribbean and the Open Door policies; and the rival doctrines of Isolation or International Cooperation.

Two hours through the year, M. W., 3.

PROFESSOR BLAKESLEE

Omitted in 1923-24.

35. THE INTERNATIONAL RELATIONS OF THE PACIFIC. The course deals with the islands of the Pacific Ocean. Among the topics presented are: the "scramble" for the Pacific in 1884; Germany's colonial empire; the Pacific island possessions of the United States; Japan's colonial aims and policy; naval bases and strategic centers; economic and commercial values; the World War in the Pacific; the settlement at the Paris Conference; mandates—their administration, and the claims of the United States; and the Washington Conference.

One hour, through the year.

PROFESSOR BLAKESLEE

Omitted in 1923-24, and to be omitted in 1924-25.

321. SELECTED TOPICS IN RECENT BRITISH HISTORY. A research course based upon a study of source material. The fields of investigation will change from year to year. In 1923-24, Anglo-Turkish relations, the rise of the Labor Party, and Dominion status were considered.

Two hours, first semester, M. W., 5; second semester, M. W., 4.

PROFESSOR DENNIS

331. EUROPEAN INTERNATIONAL RELATIONS, 1878-1918. A study of the diplomatic history of Europe from the Congress of Berlin to the Peace of Versailles on the basis of the abundant source material recently published. Bismarck's system of alliances and the hegemony of Germany, the development of the Eastern question and the estrangement of Austria and Russia, the Franco-Russian Alliance, the growing rivalry of Germany

+ Graduate Students given 3 Sem hrs, 1st Sem. 1923-4.

and England, the Entente Cordiale and the diplomatic aspect of the World War will all be studied.

Two hours, through the year, Tu. Th., 3.

ASSISTANT PROFESSOR LANGER

To be omitted in 1924-25.

332. HISTORICAL BIBLIOGRAPHY AND CRITICISM. A study in the methods of historical research and writing. Introductory lectures on the nature and aims of history and examination of the methods in criticizing and interpreting documents. Practice in synthesizing material and a survey of the various schools of historical writing from the times of Herodotus to the present day.

Two hours, through the year, Tu. Th., 3.

ASSISTANT PROFESSOR LANGER

Omitted in 1923-24.

36. SEMINAR. The students in the Department of History and International Relations meet one evening a week for the consideration of particular topics in international relations and for the review of book and magazine material of especial value. Each member is expected to present reports which then form the basis for general discussion.

In studying these problems arising out of the war the Seminar is fortunate in having at hand the excellent war collection of the University Library, one of the largest in the country, which already numbers between seven and eight thousand volumes.

W., 7.45.

PROFESSORS BLAKESLEE, DENNIS AND LANGER

DEPARTMENT OF MATHEMATICS

PROFESSOR WILLIAMS, ASSOCIATE PROFESSOR MELVILLE

The undergraduate courses are designed to furnish a practical knowledge of fundamental methods of Mathematics that will be useful in the affairs of life, in business, and in the pursuit of the sciences—as well as to prepare students for more advanced work in Mathematics.

A *major* in Mathematics consists of twenty-four semester hours, including courses 12, 13 and 14; a *minor* consists of eighteen semester hours, including course 12.

MATERIAL FACILITIES

The Library is provided with the more important text-books, treatises, and memoirs on the various branches of Mathematics, as well as the principal journals and transactions of learned societies that are devoted to any considerable extent to Mathematics.

The Department possesses a good collection of models in addition to an adequate instrumental equipment for the work in applied mathematics.

COURSES IN MATHEMATICS

1. PRIMARILY FOR UNDERGRADUATES

11. INTRODUCTORY COURSE*: For students with *major* or *minor* in Mathematics or Physics. Elements of plane Analytic Geometry, including the straight line; plane Trigonometry; elementary theory of equations including Horner's method and De Moivre's Theorem for complex numbers; elements of determinants; and elements of differential and integral calculus. "Unified" course.

Open to Freshmen.

Three hours, through the year. M. W. F., 9.

PROFESSOR WILLIAMS

12. CALCULUS AND ANALYTIC GEOMETRY. Differential and integral calculus and Analytic Geometry.

Continuation of Course 11.

Three hours, through the year, M. W. F., 11.

ASSOCIATE PROFESSOR MELVILLE

13. CALCULUS AND ANALYTIC GEOMETRY OF THREE DIMENSIONS. Continuation of course 12 with applications to solutions of problems.

Three hours, through the year, M. W. F., 10.

PROFESSOR WILLIAMS

14. DIFFERENTIAL EQUATIONS.

Three hours, through the year, Tu. Th. S., 9.

PROFESSOR WILLIAMS

18. ELEMENTARY MATHEMATICS. A course offered primarily for students who do not intend to *major* in Mathematics or Physics but who still desire some mathematical training. The principal topics studied are Algebra, with emphasis on the solu-

*See also course 18.

tion of equations, plane Trigonometry, and coördinate Geometry. The course is designed to meet the needs of students in Physics and Chemistry who do not take Mathematics 11, and of students in other subjects who are interested in graphical methods or statistics.

Open to Freshmen.

Three hours, through the year, M. W. F., 8.

ASSOCIATE PROFESSOR MELVILLE.

19b. ASTRONOMY. Chiefly descriptive, the object being to make the students acquainted with the main features of the heavens, celestial phenomena and laws governing them, and the most important theories that have been devised to explain them.

Open to Freshmen.

Three hours, second semester, Tu. Th. S., 10.

PROFESSOR WILLIAMS

Alternates with course 110a.

110a. ELEMENTARY SURVEYING. Fundamental principles; field work with transit, level, sextant, compass, and chain; map making and map reading.

Open to Freshmen who have had trigonometry.

Three hours, first semester.

Alternates with course 19b. Omitted in 1923-24.

DEPARTMENT OF PHYSICS

PROFESSOR GODDARD, MR. ROOPE

The aim of the undergraduate work of this Department is to give to a student who has had a good high school course the opportunity to obtain that knowledge of the methods and results of modern Physics without which no one may hope to be considered liberally educated, as well as to fit him in the minimum of time with professional preparation for Chemistry, Geology, Meteorology, Geography, Medicine, the teaching of Science, Engineering, or graduate work in Physics.

Students whose *majors* or *minors* are in Physics should take, during the freshman year, either Mathematics 11 or 18, and Physics 111, which deals with practical problems in Mechanics and affords an excellent foundation for Physics 11. The de-

partment offers a three hour course, Physics 112, which includes laboratory work, for premedical students or others desiring a course of this nature, the pre-requisite being Mathematics 11 or 18.

Students *majoring* in Physics should take Physics 111 the first year, Physics 11 the second year, Physics 14 the second semester of the second year and the first semester of the third year, Physics 16 the second semester of the third year, and one or more of the courses 15, 17, 22, 23 or 24. Students *minoring* in Physics should take Physics 111 and Physics 11, followed by such other courses as they may be able to find place for in their programs. Students *majoring* in Chemistry should take courses 111, 11, 14 and 16b.

COURSES IN PHYSICS

1. PRIMARILY FOR UNDERGRADUATES

111. INTRODUCTORY MECHANICS. A course offered primarily for first year students who expect to take Physics 11 in their second year, and intended to supplement Mathematics 11 or 18. The fundamental laws of statics and dynamics are studied. Much attention is given to the solving of problems.

Students with a liking for Mathematics who cannot take a *major* or a *minor* in that subject will find in this course a suitable elective. Open to those who have completed or are taking Mathematics 11 or 18.

Open to Freshmen.

Three hours, through the year, Tu. Th. S., 10. MR. ROOPE

11. GENERAL PHYSICS. This course lays the groundwork for those who desire to take up Engineering, Chemistry, Medicine, or the teaching of science as a profession, and is the natural starting point for those wishing to do further work in Physics. During the first semester the work covers mechanics and heat; and during the second semester, electricity and magnetism, wave motion, sound, and light. The text-book for the current year is Duff's *General Physics*.

Open to those who have had either Mathematics 11 or 18, and Physics 111. Five lectures and one laboratory period per week

in the first semester, three lectures or recitations per week in the second semester.

Six hours, first semester, M. W. Th. F. S., 10; Th., 2; *three hours*, second semester, M. W. F., 10.

PROFESSOR GODDARD

112. GENERAL PHYSICS. This course is intended for pre-medical students and for others who desire a three hour course in general Physics, covering much the same ground as Physics 11, and including laboratory work. Mathematics 11 or 18 prerequisite. The text-books are Millikan's *Mechanics*, *Molecular Physics and Heat* and Millikan and Mill's *Electricity, Sound and Light*. Two lectures or recitations and one laboratory period per week, together with one optional, unprepared hour of problems and discussion.

Three hours, through the year, M. W. F., 9; F., 2.

PROFESSOR GODDARD

14. MECHANICAL AND ELECTRICAL MEASUREMENTS. In the first semester, taken after the completion of course 11, the course consists of a series of exercises in dynamics, including kinetics of translation and rotation, elastic properties of materials, and advanced problems in heat. In the second semester this is a systematic course in electrical measurements, with a few advanced problems in light, and constitutes the laboratory portion of the work in Physics 11. One lecture and two laboratory periods per week.

Three hours, for two semesters, beginning with the second semester of the college year, M. W., 2; F., 12. MR. ROOPE

15. THERMODYNAMICS AND OPTICS. Elementary theory of thermodynamics and optics, chiefly optics, presented by lectures and recitations, including work in practical photography. Mathematics 12 must be taken before or with this course. The respective text-books are *Treatise on Heat*, Edser or Perkins, and a *Treatise on Light*, Houstoun.

Three hours, through the year. M. W. F., 9. MR. ROOPE

16b. ADVANCED PHYSICAL MEASUREMENTS. This course deals with advanced problems in physical measurements, chiefly

in optics and electricity. Physics 14 is prerequisite. One lecture and two laboratory periods per week.

Three hours, second semester.

MR. ROOPE

17. ADVANCED GENERAL PHYSICS. Lectures and recitations. This course is intended for those desiring a more advanced presentation of mechanics, electricity, heat, and light than is afforded by Physics 11, yet who do not desire year courses in these special subjects. Although the treatments are less complete than in courses 22, 23, and 15, a good perspective of the subject of Physics may nevertheless be gained. Mathematics 12 must be taken before or with this course.

Three hours, through the year.

PROFESSOR GODDARD

Omitted in 1923-24.

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

22. ELEMENTARY THEORETICAL MECHANICS. Systematic presentation of theory by lectures and recitations together with the solution of problems. Mathematics 12 must be taken before or with this course. The text books are Horace Lamb's *Statics and Dynamics* and Slocumb's *Theory and Practice of Mechanics*.

Three hours, through the year, M. W. F., 8.

PROFESSOR GODDARD

To be omitted in 1924-25.

23. ELEMENTARY THEORY OF ELECTRICITY AND MAGNETISM. Systematic presentation of elementary theory by lectures and recitations, together with the solution of problems, including the general principles of dynamo and motor design, and the solution of branched alternating current circuits. This course is of especial importance to those intending to specialize in Physics, Mathematics, or Engineering. Mathematics 12 must be taken before or with this course. A knowledge of the more important differential equation is advised. Starling, *Electricity and Magnetism*.

Three hours, through the year.

PROFESSOR GODDARD

Omitted in 1923-24.

24. DYNAMICS. General principles, equations of Lagrange and Hamilton, methods of Hamilton and Jacobi, systems of parti-

*Seminar - Suppl. Physical Probs & Current Literature (1924)
Modern Treatise in Phys. (1925)*

cles. This course is fundamental for the pursuit of all the others, and includes a detailed account of the principles of Least Action and the differential equations of Lagrange, preparatory to their application to other parts of Mathematical Physics, such as optics and electricity.

Newtonian and Logarithmic Potential Functions, Attraction of Ellipsoids. This subject is a necessary preliminary to the study of electricity and magnetism, of hydrodynamics, and of the figure of the earth.

Motion of Rigid Bodies and the Theory of Moving Axes. The subject of gyroscopes and rotating bodies is given together with applications.

PROFESSOR GODDARD

219. HISTORY OF PHYSICS. A conference course on the history of the various branches of Physics. Open to seniors *majoring* in Physics and to others by special permission.

Three hours, either semester or through the year.

PROFESSOR GODDARD

DEPARTMENT OF PSYCHOLOGY

PROFESSOR SANFORD, PROFESSOR MURCHISON

The Department of Psychology offers both elementary and advanced courses covering a considerable range of topics. All the facilities of the Department are available to any student registered in it, according to his ability to profit by them. Undergraduates of demonstrated competence will not be refused an opportunity to participate in researches for which they are prepared, and graduate students whose preparation is anywhere defective will have opportunity in the elementary courses for making up their deficiencies without the abandonment of their advanced work.

LIBRARY FACILITIES

The University Library contains an unusually large collection of psychological literature and literature in related departments. The Library is especially rich in scientific periodicals and the proceedings of learned societies. The Laboratory of Experimental Psychology has also an independent working library.

S. Primarily for Graduate Students.

30. Electricity. Seminar course, meeting once a week *Prof. Goddard*

37. Partial Diff. Eq's with Applications, Seminar course, meeting once a week. *Prof. Goddard*

THE PSYCHOLOGICAL LABORATORIES

The Laboratories of Experimental Psychology occupy fourteen rooms on the upper floor of the Main Building of the University. They are well equipped with general apparatus, and have an annual appropriation sufficient to provide for the purchase and manufacture of such apparatus as may be required for special investigations. The workshop contains an excellent equipment of tools and materials for the manufacture and repair of apparatus.

COURSES IN PSYCHOLOGY

1. PRIMARILY FOR UNDERGRADUATES

11. GENERAL PSYCHOLOGY. An introductory course designed to present the facts and laws of the mental life in their larger outlines and to lead the student to a rational understanding of his own mental processes. Text-book, informal lectures and collateral reading.

This course forms a natural approach to all the advanced courses offered and is a definite prerequisite to all except courses 201 and 202. Indivisible course.

Open to Freshmen in exceptional cases on consultation with the instructor.

Three hours, through the year. M. W. F., 11.

PROFESSOR MURCHISON

2. FOR ADVANCED UNDERGRADUATES AND GRADUATE STUDENTS

201. EDUCATIONAL PSYCHOLOGY. The aim of this course is a consideration of the learning process in its various aspects and in its dependence upon man's original tendencies and capacities. Text-books, discussions, informal lectures, and demonstrations. Psychology 11 or its equivalent is a highly desirable preparation, but is not a prerequisite. Not a divisible course.

Open to Juniors and Seniors.

Three hours, through the year. Tu. Th. S., 9.

PROFESSOR SANFORD

202. SOCIAL AND ETHNIC PSYCHOLOGY. This course will be devoted to a study of man's instinctive tendencies as they show themselves in his relations with his fellow men. Such topics as

custom, convention, psychic contagion, and the mob spirit will be discussed, as well as man's great social achievements such as language, government, morals, and religion. Informal lectures, text-book, discussions, and collateral readings. Open to Juniors and Seniors. Not a divisible course.

Three hours, through the year. M. W. F., 10.

PROFESSOR MURCHISON

203. EXPERIMENTAL PSYCHOLOGY. A demonstrational and laboratory practice course intended to acquaint the student with the chief types of psychological experimentation, to give him first-hand experience of fundamental psychical phenomena under experimental conditions, with practice in observing and reporting them, and to initiate him, so far as time permits, into the laboratory arts and procedures. Open to students who have completed Psychology 11 or its equivalent. Not a divisible course.

Three laboratory periods of *two hours* each, through the year.

Omitted in 1923-24

PROFESSOR SANFORD

3. PRIMARILY FOR GRADUATE STUDENTS

301. COMPARATIVE AND GENETIC PSYCHOLOGY. A general account of mental development in animals and in man. The course will consist of informal lectures, collateral reading, and conferences for coöperative study.

Two hours, through the year.

PROFESSOR SANFORD

Omitted in 1923-24.

302. ADVANCED GENERAL PSYCHOLOGY. A study of the major problems of psychological science in the light of Biology, Physiology, Psychiatry, and the Psychological laboratory.

Two hours, through the year.

PROFESSOR SANFORD

303. MENTAL MEASUREMENTS. A theoretical and practical study of the schemes proposed for measuring native human capacity and for evaluating educational efficiency. Text-book and lectures together with practice work in testing and in statistical calculations.

Two hours, through the year.

PROFESSOR MURCHISON

304. PSYCHOLOGICAL JOURNAL CLUB. Devoted to the study of selected topics in current psychological literature.

One two-hour period, through the year. W., 3.

PROFESSOR SANFORD

305. RESEARCH. All students *majoring* in the Department of Psychology for advanced degrees will be expected to undertake a suitable research problem under the direction of Professor Sanford or Professor Murchison.

306b. MENTAL AND NERVOUS DISEASES. Through the courtesy of the superintendent and staff of the Worcester State Hospital, the Department of Psychology is enabled to offer a course of sixteen lectures on Psychiatry and related topics. Some of the lectures will be given at the University and some (those requiring clinical demonstrations) at the Hospital.

One hour a week, second semester.

Omitted in 1923-24

307. SEMINAR ON EDUCATIONAL PSYCHOLOGY. This seminar is intended primarily for teachers and graduate students, and meets on Saturdays.

One hour a week, through the year. S., 11.

PROFESSOR SANFORD

308a. CRIMINAL AND ABNORMAL PSYCHOLOGY. This course investigates data bearing on the intelligence of the criminal, types of criminals, recidivism, effects of length of incarceration, racial and geographical concomitants, seasonal distribution; religious, literate, age, domestic, and industrial factors in crime; and attempts to describe criminal behavior in the light of norms already familiar. The same technique will be used in the investigation of subnormal and abnormal behavior, though necessarily restricted by the limitations of the course.

Two hours, first semester.

PROFESSOR MURCHISON

New course to be offered in 1924-25.

309b. APPLIED PSYCHOLOGY. A survey of the historical applications of psychological information, together with a critical examination of contemporary technique in this field. Psychological applications in the fields of medicine, law, industry, and vocational guidance, will be considered.

Two hours, second semester.

PROFESSOR MURCHISON

New course to be offered in 1924-25.

DEPARTMENT OF ROMANCE LANGUAGES

PROFESSOR CHURCHMAN, MR. MELLOR

See the statement of the general requirement in foreign language, page 40, for all candidates for the A.B. degree.

As now organized, the French courses in this Department are planned with the following ends in view: French 11 and 12 are the basic language courses, in which it is the purpose to develop reading ability with at least a beginning of writing and speaking; when possible a student should take the full twelve hours of this sort of work. To the student who has completed 12, courses 13 and 14 offer an option between a continuance of general language work and a course limited to translation and literature; both may of course be taken. Those who have completed 13 and 14 may take 15 and 16—courses in which the literature of two important centuries is studied intensively. Prospective teachers will take course 18a.

A *major* in Romance Languages consists of at least twenty-four semester hours selected from the courses described below; but not more than twelve semester hours in elementary courses (French 11, Italian 11, and Spanish 11), may be counted in a *major*. A typical *major* for a student who has had three years of French in the high school would include courses 13, 14, 15, and 16,—with the teachers' courses or Italian or Spanish as alternatives. Those who have had less French would begin with French 12. A beginner would take 11, 12, 14, (also 13 if desired), and 15 or 16. The attention of students intending to *major* in Romance Languages is called to the statement concerning the required courses in Greek or Latin, on page 39.

COURSES IN FRENCH

1. PRIMARILY FOR UNDERGRADUATES

11. FOR BEGINNERS. Grammar, pronunciation, oral work, and composition, based on Cerf and Giese's *Beginning French*. Reading of easy modern French. The main purpose of the course is to develop reading ability. Not divisible.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 9. MR. MELLOR

12. INTERMEDIATE. Reading of Modern French, with grammar, composition, pronunciation, and oral exercises. Course 12 is a continuation of course 11, and is also open to students who have had two years of high school French. Rapid review of Fraser and Squair's *Shorter French Course*. Reading from such works as Halévy's *un Mariage d'Amour*, *Recit et contes de la guerre de 1870*, (Daudet), *le voyage de M. Perrichon*, (Labiche et Martin), *Carmen* and other stories (Merimée).

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 8. MR. MELLOR

13. ADVANCED FRENCH. This course is designed to continue and supplement the language work of course 12; it is also open to students who have had three years of high school French. Since the parallel course (14) offers ample opportunity for the development of reading ability, the emphasis in this course is placed upon the spoken and written language. The major part of the early work is devoted to a careful study of pronunciation and to a very rapid review of the elements of grammar in application to oral exercises. Immediately thereafter comes a survey of grammar and syntax in Fraser and Squair's *French Grammar* (new complete edition). Oral work in every day French is continued through the year. The later months are largely devoted to rapid reading in the French short story and play, the material being handled in French oral and written exercises as often as possible.

Open to Freshmen.

Three hours, through the year. M. W. F., 9. MR. MELLOR

Probably to be omitted in 1924-25.

14. GENERAL VIEW OF FRENCH LITERATURE. This course offers a general introduction to French literature with the triple purpose of meeting the needs of those who wish to gain some knowledge of that literature without doing the intensive linguistic work of French 13; of supplementing the work of French 13 by wider reading in good literature; and of laying the foundation for the specialized courses in the literature of particular centuries. For students entering with the minimum preparation the only text to be read is the Vreeland and Michaud *Anthology of*

French Prose and Poetry (Ginn); but all who enter with more than this minimum are expected to read collaterally along lines to which their tastes may lead them. Brief outline of the facts of French literature and discussion of literary values based upon Strachey's *Landmarks in French Literature* (Holt). This course is open to students who have passed French 12 or who have had three years of French in the high school.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 12.

PROFESSOR CHURCHMAN

15. LITERATURE OF THE SEVENTEENTH CENTURY. A large amount of reading from the works of Corneille, Racine, Molière, Boileau, La Fontaine, Descartes, Pascal, La Rochefoucauld, Bossuet, La Bruyère, Mme. de Sévigné. Historical and critical survey of the literature of the period, based upon Abry, Audic and Crouzet *Histoire illustrée de la littérature française*. The main purpose of this course is to give the student a first-hand knowledge of the masterpieces of French classical literature, with a connected and critical knowledge of the literary history of the period. After a rapid survey of preceding centuries in Strachey's *Landmarks in French Literature* (Holt), and a brief outline study of the seventeenth century itself by means of Strachey, and the Vreeland-Michaud *Anthology*, (Ginn), the most important authors of the seventeenth century are intensively studied, with as wide reading from each as time allows, supplemented by class discussion and the use of the manual for necessary information. No lectures or translating, the time in the class-room being devoted to discussion and reading in the original.

Three hours, through the year. PROFESSOR CHURCHMAN

Omitted in 1923-24 and probably to be omitted in 1924-25.

NOTE: For admission to French 15 and 16, it is ordinarily expected that a student shall have passed French 14 with credit, but exceptionally good reading ability and a small amount of special preparation in the literature may occasionally make it possible to waive this condition.

16. LITERATURE OF THE NINETEENTH CENTURY. Historical and critical survey, with wide reading from the most significant

authors of the century. The spirit, method, and plan of the work are similar to those of course 15. First comes an outline study of the nineteenth century by means of Strachey's *Landmarks in French Literature* and the Vreeland and Michaud *Anthology*. Then, after a somewhat detailed discussion of the later eighteenth century, follows the intensive study of the literary masterpieces of the nineteenth century, especially lyric poetry, drama, and the novel, accompanied by a discussion of the facts and comment contained in the Abry, Audic and Crouzet *Histoire illustrée de la littérature française* and in the writings of other critics. Few if any lectures, and no translation. For conditions of admission to this course see note above.

Three hours, through the year.

PROFESSOR CHURCHMAN

To be omitted in 1924-25.

17. ADVANCED COMPOSITION AND ORAL WORK. Designed to provide teachers and other advanced students with a ready command of the spoken and written language. Review of the theory and practice of pronunciation upon a phonetic basis. Systematic study of grammar and syntax through a hasty survey of R. T. Holbrook's *Living French*, a thorough mastery of E. C. Armstrong's *Syntax of the French Verb*, and special study of selected topics by means of references to several standard authorities. Further familiarity with the spoken language is encouraged by use of the phonograph outside of class, and some special attention is given to the building of a vocabulary of common phrases and to systematic observation of French usage. Occasional themes in French. Open to students who have passed course 13 with credit, or who have done work equivalent in kind and amount.

Three hours, through the year

PROFESSOR CHURCHMAN

Omitted in 1923-24 and probably to be omitted in 1924-25.

18a. AIMS AND METHODS OF TEACHING FRENCH, with incidental reference to German and Spanish. Lectures and collateral reading. Practice teaching, under critical supervision, according to both the direct and text book methods. This course is open to students who have passed with credit French 12, German 12, or Spanish 12, or who have done the equivalent of one

of these courses. A knowledge of more than one language is desirable, but not necessary.

Three hours, first semester.

PROFESSOR CHURCHMAN

Omitted in 1923-24 and probably to be omitted in 1924-25.

19. DRAMA OF THE NINETEENTH CENTURY. Reading and discussion of one play a week selected from representative authors beginning with the Romantics and ending with contemporary dramatists, *e. g.*, Dumas, *père*, Hugo, Vigny, Musset, Scribe, Dumas, *fils*, Augier, Becque, Sardou, Coppée, Rostand, Hervieu, Bernstein, Brieux, Capus, Lavedan, Mæterlinck. This course meets in the evening and is open to qualified persons outside the student body. Fluent reading ability is assumed.

One meeting weekly, through the year

Omitted in 1923-24 and probably to be omitted in 1924-25.

PROFESSOR CHURCHMAN

112. SCIENTIFIC FRENCH. Open to students who have had three years of high school French, or French 12 in college. Daniel's *French Scientific Reader*, Luquiens' *Popular Science* and *First Scientific French Reader* (Bowen).

Open to Freshmen.

Three hours, through the year.

MR. MELLOR

Omitted in 1923-24 and probably to be omitted in 1924-25.

NOTE: This course may be counted toward the requirement in foreign language only by students majoring in Division A (Science), and may not be presented as the "third-year language course," to meet the requirement 2 (c) page 39.

SATURDAY MORNING COURSES (INTERMEDIATE FRENCH.) Designed for those who have studied the language but who wish to review and continue it. Particular attention is paid to the needs of teachers interested in the phonetic approach to pronunciation. This course begins at the very beginning with the phonetic foundations of pronunciation, and then makes a hasty survey of the elements of the language, first upon a *reading* basis, next in the form of *aural* exercises, and finally in an *intensive review* of composition, oral exercises, rules and paradigms. When the

elements have been thus surveyed, work of an intermediate grade is taken up in more leisurely fashion.

One hour, through the year., S., 11. PROFESSOR CHURCHMAN

COURSES IN SPANISH

1. PRIMARILY FOR UNDERGRADUATES

NOTE: In 1924-25 it is probable that only one course in Spanish will be offered; either Spanish 11 or 12.

11. ELEMENTARY COURSE. The Hills and Ford *First Spanish Course*. Translation of simple prose. The first purpose of the course is to develop the ability to read, but a liberal use is made of oral and written exercises. Emphasis is divided between South America and Spain. Not divisible.

Open to Freshmen.

Three hours, through the year, Tu. Th. S., 11. MR. MELLOR

12. ADVANCED COURSE. Combination of readings from Spanish literature with more advanced study of the language, oral and written. Review of the more difficult exercises in the Hills and Ford *First Spanish Course*. Reading of representative masterpieces, *e. g.*, *Don Quixote* (selections), one modern novel, one play, short stories. Open to students who have passed course 11, or who have had two years of Spanish in the high school.

Open to Freshmen.

Three hours, through the year. Tu. Th. S., 9.

PROFESSOR CHURCHMAN

13. THIRD YEAR SPANISH. To be given when justified by the demand. Readings from Spanish literature and further work in composition and speaking. Open to students who have passed course 12, or who have had three years of Spanish in the high school.

Open to Freshmen.

Three hours, through the year.

PROFESSOR CHURCHMAN

Omitted in 1923-24 and to be omitted in 1924-25.

COURSES IN ITALIAN

1. PRIMARILY FOR UNDERGRADUATES

11. ELEMENTARY COURSE. The chief purpose of this course is to develop as rapidly as possible the ability to read Italian easily

and accurately. As soon as a hasty survey of the elements of the language has provided the student with the necessary materials, reading is begun, and thereafter oral exercises, composition, and grammar are used chiefly as a means to greater facility in reading. Wilkins' *First Italian Book*; Grandgent's *Italian Grammar* (revised edition); Farina's *Fra le corde d'un contrabasso*; Fogazzaro's *Peregrinatio*; *Italian Short Stories* (Wilkins and Altrocchi); Manzoni's *I promessi sposi*; possibly a play of Goldoni's. In the second semester either the *Inferno* or the *Purgatorio* of Dante is read. Not divisible.

Open to Freshmen.

Three hours, through the year.

PROFESSOR CHURCHMAN

Omitted in 1923-24 and to be omitted in 1924-25.

Degrees Conferred

In the Calendar Year 1923

BACHELOR OF ARTS

Harold Butler Armitage	Richard MacDonald Holmes
Royal Richardson Babcock	Palmer Peckham Howard
Lawrence Elliot Bliss	Leo Ivok (<i>As of June 1922</i>)
Kenneth Smith Buxton	Frank Jay Jacobson
Wendell Justin Clark	(<i>With Honor</i>)
Arthur William Ferguson	William Timothy Keefe
Herman Finkelstein	Edwin Ebenezer Knowlton
Gardner Patrick Henry Foley	Benjamin Levenson
Frank Herbert Fowler	Eric Woodall Mansur
(<i>With Highest Honor</i>)	Jacob Ernest Nadler
Winston Earle Fox	Arthur Morrill Neal
Albin Ernest Franz	Corydon Richard Nichols
Joseph Goldberg	John Francis O'Brien
Sherman Elias Golden	Samuel Perman
Clinton Hartley Grattan	Sheldon Bruce Smith
Waldemar Herman Groop	Hiram Sylvanus Taylor, Jr.
William Gunter	Puzant Kevork Thomajan
Daniel James Heffernan	Stanwood Bartlett Eugene
Donald Ellwood Higgins	Towne
(<i>With High Honor</i>)	Lester Perrine White
Roger Walcott Higgins	(<i>With Highest Honor</i>)
Abraham Zweigbaum	

MASTER OF ARTS

Edmund Gustave Eric Anderson	Albert LaFleur
Frank Guy Armitage	Louis Orville Machlan
Grace Amelia Cockroft	James Patrick Melican
Martha Mildred Crumley	Ralph W. Mitchell
Floyd Reed Eastwood	Charles Frederick Mullette
Rudolph Fahl	Margaret Morse Nice (<i>As of June 1915</i>)
Harriet Adelaide Foley	Ellen Josephine O'Leary
John Vincent Ford	William Terry Osborne
John D. Forney	Allen Baker Partridge
Laurence Standley Foster	Lewis Hamlin Piper
Homer William Guyton	John Pucillo
Taichi Harada	John Edward Ratigan

CLARK UNIVERSITY

Annual Commencement

June 16 1924 at half past two

Order of Exercises

March: Commencement Day
Overture: Stradella

C S Morrison
Flotow

Clark University Orchestra
J Edward Bouvier: Director

Invocation

The Reverend Robert MacDonald
Pastor of Plymouth Congregational Church

Commencement Address

Edmund C Sanford
Professor of Psychology and Education
Clark University

The President's Annual Statement

Violin Solo: Ave Maria

Schubert
Ralph Gilbert '24

Conferring of Degrees

Benediction

March: The Field of Glory

Zamecnick

The audience is requested to remain seated until the academic
procession has passed out

Candidates for Collegiate Degrees

Bachelor of Arts

Jerome Frederick Bergan
 Jacob J Berman
 Charles Albert Brigham
 William Brodie
 Irving Charles Cohen*
 Francis Joseph Coty
 Charles Francis Cowdry* *ju.*
 Ray Theodore Elliott
 Hyman Isadore Feinberg
 Ralph Wesley Gilbert
 James Phillips Hannan*
~~Russell Byron Hastings~~
 Everett Wesley Hood
 Carl Albert Johnson
 Charles V King
~~Harold William Landin~~
~~Abraham Maurice Lipschitz~~

Harold Edward Lynch
 Katsuhei Miyamoto
 Harry Pearse
 Henry William Pope
 Peter Frank Popko
~~Norwood Potter~~
 Ronald William Price*
 Eugene Laurian Richmond
 Michael Francis Riley
 Richard Merrill Saunders
 Isadore Erwin Schultz
 Jeremiah Patrick Shalloo
 David Meyer Shor
 Percy Edward Thayer*
 Edmund Barber Towne
 Charles Bushnell Wooster
 Jacob Isadore Yanofsky

*Degree to be awarded later on completion of additional work

Degree awarded Aug. 17, 1904

With Honor

✓ Russell Byron Hastings
 ✓ Harold William Landin

✓ Norwood Potter
 ✓ Nils August Riffolt

✓ Charles Bushnell Wooster

With High Honor

✓ Abraham Maurice Lipschitz

With Highest Honor

✓ Richard Merrill Saunders

Annual Collegiate Honors

SENIORS

First Honors

Abraham Maurice Lipschitz
 Richard Merrill Saunders

Second Honors

Ralph Wesley Gilbert
 Charles Bushnell Wooster

Annual Collegiate Honors

Continued

SOPHOMORES

First Honors

Irvin Eugene Crouch

Second Honors

Paul Stephen Clarkson
Elford Sturtevant Durgan
Leo Arthur Goldblatt
John Joseph Toomey

FRESHMEN

First Honors

Hyman Howard Green

Second Honors

Harry Zarrow

Annual Award of the Prentiss Hoyt Prize in Poetry:
to John Tashjian for his poem "Saturation"

Candidates for University Degrees

Master of Arts

W Kenneth Smith Buxton
S Stuart Hyland Cammett
W Edward Seaton Carney
E+SH Jason Hawking Chen
E+SH Almira Gertrude Coulson
H+IR Hartley William Cross
E+SH Harry August Engleman
H+IR Robert Munson Grey
" LeRoy Marshall Handy
PW Donald Ellwood Higgins
PS Edna Vesta Howell
S Ella Bartlett Knight
PS Frank Sidney Lloyd

E+SH Harry Elias Mack
W Arthur Bruce Morrison
H+IR Harold Augustus Mountain
W Arthur Morrill ~~Neal~~ NEAL
E+S Denmatsu Nuki
E+SH Nucia Perlmutter
W John Adrian Ridderhof
PW Nils August Riffolt
S Ina Cullom Robertson
" Henry Harrison Russell
W Stanwood Bartlett Eugene Towne
S Guy Herbert Winslow

Doctor of Philosophy

Phillip Gerald Auchampaugh
George Fletcher DesAutels

W Willard N Greer
S Laura Lucile Morse

The Conferring of an Honorary Degree

August 15, 1924
Master of Arts

E+SH Harry Zarrow 75
S Ella Bartlett Knight 75
S Guy Herbert Winslow 75

FOUNDER'S DAY CONVOCATION

1924

March: The Ambassador *L J Zamecnik*

Overture: The Wings of Love *Theodore Bendix*

UNIVERSITY ORCHESTRA

Founder's Day Address DR FREDERICK J TURNER
Professor of History Harvard University

The Outlook PRESIDENT WALLACE W ATWOOD
Clark University

The Lost Chord *Arthur Sullivan*
UNIVERSITY QUARTET

Conferring of Degrees

March: On to the Field of Glory *L J Zamecnik*
UNIVERSITY ORCHESTRA

CANDIDATES FOR THE DEGREE OF BACHELOR OF ARTS

Jason Hawking Chen Nils August Riffolt
Elmo Tanner

CANDIDATES FOR THE DEGREE OF MASTER OF ARTS

WJR Emilie Charlotte Caase *Hest* George Franklin Howe *Georg*
WJR Wendell Fremont Farrington *Hest* George Ellsworth Johnson *Ed*
Percy Martin Roope *Phye* (as of 1895)

CANDIDATE FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

William Vyne Sessions *Chen*

Clifford Emory Horton
 LeRoy Clinton Husbands
 James Albert Henry Imlah
 Eric Pearson Jackson
 Warren Charles Johnson
 Thorsten Waino Valentine
 Kalijarvi
 James Hugh Clement Loughrey

George Edgar Rice
 Stanley Enoch Rodgers, Jr.
 Joseph Francis Russell
 John Patrick Schmucker
 Ralph Pray Seward
 Marjorie Mae Shank
 Chester Hines Shiflett
 Julia Mary Shipman
 Kazutaro Torigoye

DOCTOR OF PHILOSOPHY

Frederick Kenneth Branom
 Elizabeth Anthony Dexter
 Robert Cloutman Dexter
 Henry Douglas Fryer
 Preston Everett James

Ji-Yen Rikimaru
 William Roderick Sherman
 Allen Byron Stowe
 Jesse Elmer Switzer
 Earle Forrester Whyte

SUMMARY

Bachelor of Arts	38 + 3
Master of Arts	40
Doctor of Philosophy	10 + 4

Bachelor of arts Feb. 1923

LeRoy Albert Lyon Edward James Long
 Abraham Brand

Doctor of Philosophy

Hugh Llewellyn Hartley Albertine Richard
 Raphael Rosen Andrew Fish

* Fellow in Psy 1917-18 under name
 of Rosenfeld

Master of Arts (Aug. 1923)

Clarence Adelaide Foley Marjorie Mae Shank
 Ralph W. Mitchell Kazutaro Torigoye
 Margaret Morse Nye (as of 6/17/15)

Register

Explanation: Degree follows name; S-scholar; F-fellow; HF-honorary fellow; number 24 to 27 undergraduates; g-graduates; s-special students; ss-summer school student in 1923; Chem-chemistry; Econ-economics and sociology; Educ-education and school hygiene; Geog-geography; Hist-history; Phys-physics; Psy-psychology.

State omitted-Massachusetts; town omitted-Worcester; street names refer to streets unless avenue is given.

Name	Classification	Home Address	Worcester Address
Allen, Mary Kibbe	Hist s	Springfield	23 Gates
Ambrosi, Mrs. Mary Loman	ss	Washington, D. C.	
Anderson, Henry Charles	26		52 Olga Ave.
Anderson, Sarah	ss	Grantsville	
Armitage, Frank Guy A.M.	Hist F	Albany, N. Y.	166 Woodland
Atwood, Mrs. Harriet T. B.	ss		160 Woodland
Auchampaugh, Philip Gerald A.M.	Hist F	Syracuse, N. Y.	166 Woodland
Bacon, Alma A.	ss		10 Northampton
Baker, Helen Agatha	ss	Fall River	
Bassett, George Walter	26		95 Hillcrest Ave.
Bates, James Edmund	Educ g		5 Abington
Battey, Gretchen Idella A.B.	ss		263 Heard
Beaton, Stephen, Jr.	27	Millbury	
Benner, Clyde Freeman	26	Waldoboro, Me.	2½ Wyman
Bennett, Robert Studley	27		35 Uxbridge
Bergan, Jerome Frederick	24	Northampton	54 Downing
Bergstrom, Francis William Ph.D.	Chem F	Stanford, Cal.	24 Beaver
Berman, Jacob	24	Colchester, Conn.	12 Oberlin
Beswick, Albert Edward	26	Diamond Pt., N. Y.	4 Hancock
Blades, Anley	25	Ash Grove, Mo.	35 Maywood
Bodurtha, Robert E. A.B.	s		2 Buckley Rd.
Bresnev, Morris Irving	27	So. Norwalk, Conn.	6 Wyman
Brigham, Charles Albert	24	West Boylston	
Brodie, William	24		3 Spruce
Brophy, Rosemary	ss	Saxonville	
Brosnahan, Katherine M. A.B.	ss	Millbury	
Brotherton, Walter Matthew	27		18 Hitchcock Rd.
Brown, Nina	ss	Peoria, Ill.	
Buck, Helen Angela	ss	Springfield	
Burbank, Davis Edward	27		5 Lucian
Burgess, Wayland McColley B.S.	Chem. S		217 Dewey
Burwick, Barnet James	26		85 Penn Ave.
Burwick, Hyman	26		86 Penn Ave.
Butler, Guy Phineas	27	Lowell	35 Maywood
Buxton, Kenneth Smith A.B.	Chem S		83 Brookline
Caase, Emilie Charlotte	Hist ss g		77 Downing
Callahan, Mary Jane	s		145 Woodland
Callahan, Mary M.	s		93 Elm
Campbell, Elizabeth Salmon	s		35 May
Carey, Thomas Albert A.B.	Ed. g		8 Bedford Ave.
Carlson, C. William B.D.	s		5 Wilkinson
Carlson, Gustaf	26		22 Stockholm
Carlson, Harry Gordan B.P.E.	Educ g	Jamestown, N. Y.	180 Woodland
Carney, Edward Seaton A.B.	Chem S	Kalamazoo, Mich.	15 Birch
Case, Gilbert Eugene	ss	Greenwich	
Cashman, Benjamin Thomas	27	Berlin, Conn.	455 Park Ave.
Chace, George Bryant	26	Stratford, Conn.	973 Main
Chelifou, Homer Peter	26		76 Orient
Chen, Jason Hawking A.B.	Educ g	Soochow, China	15 Gates
Choquette, Charles August	ss 27		31 Chrome
Churchman, Mrs. Mary C. S.	ss		20 Institute Rd
Civalier, Roland	27	Auburn	
Clarkson, Paul Stephen	26		5 Bernice
Cockroft, Grace Amelia A.M.	ss	Woonsocket, R. I.	
Cohen, Irving Charles	24		7 Gold
Collamore, Edna Augusta	ss s		11 Isabella
Collins, Margaret	ss		56 Wellington

1 Extra-mural representative - not studying 1923-4.
 2 Left in 12th Sem. - to teach.

Connor, Jennie Eva	ss s	Southbridge	21 Shirley
Connolly, Paul A. A.B.	s		90 Prospect
Corbin, Milton Wallace	27		18 Hermon
Corkham, Cecil Simpson A.B.	ss	South Lancaster	
Coty, Francis Joseph	24		301 Cambridge
Coulson, Almira Gertrude B.S.E.	s		157 Dewey
Courtney, Ellen Agnes	ss		7 Sycamore
Cowdrey, Charles Francis, Jr.	24	Fitchburg	35 Maywood
Cronin, Frederick Timothy	25	Ballardvale	973 Main
Cross, Hartley William B.H.	Hist g	South Australia	14 Stoneland Rd
Crossley, Lester Francis	26		130 Grandview Ave.
Crouch, Irvin Eugene	25	Groton, Conn.	87 Florence
Crowell, Ruth	ss	Bradford	
Cruise, Robert Bindloss	ss	New London, Conn.	
Cullen, Annie L.	ss		171 Highland
Cunningham, Helen M.	s		5 Pelham
Cunningham, Ruth	s		5 Pelham
Dana, Elizabeth Mabel A.B.	ss		5 Forestdale Rd
Dawson, George Alexander	26		7 Cottage
Day, George Willis B.S.	ss	Lynn	
Dean, Stanley Edward	20		182 Austin
Denny, Nathan Joseph	24	New Haven, Conn.	12 Oberlin
DesAutels, George Fletcher A.M. Chem F		Kalamazoo, Mich.	15 Shirley
Dewar, Margaret Helen	ss		94 Lakewood
Dickie, Allan A.M.	Hist g		30 King
Dickinson, Charles Alexius A.M. Psy F			199 Pleasant
Dickinson, Roger Francis	27	Spencer	
Dix, Charles Templeton	25	Southville	
Dodge, Ruth Fernald	ss		16 Kenilworth Rd
Doherty, Richard Powers	26	Wilton, N. H.	87 Florence
Donnelly, Mary T.	s		31 Grand
Dorward, Arthur Rex	25		58 Cedar
Doten, Mrs. Edith K.	ss		14 Northampton
Dow, Richard Burt	27	Willimantic, Conn.	13½ Kilby
Dowd, Gordon Kingsbury	26		981 Main
Drumm, Francis A. A.B.	s		Holy Cross Col.
Dumas, Theodore Eugene	26		66 Francis
Durgan, Elford Sturtevant	26	West Boylston	
Dyer, George Burton	27	Framingham	
Eagan, Henry Francis	27		1 Freeland Ter.
Earley, Sarah E.	s	Spencer	833 Main
Eastwood, Floyd Reed A.M.	Educ. S	Rochester, N. Y.	35 Maywood
Eldridge, Ruth Merriman	ss	Hancock, N. H.	
Elliott, Ray Theodore	24	Antrim, N. H.	16 Tirrell
Engleman, Harry August B.H. Educ. g		Rockaway, N. J.	14 Stoneland Rd.
Epstein, George Nathan	26		180 Vernon
Erickson, Robert Sven	s		15 Forestdale Rd
Fallstrom, Iver Waldemar	26		21 Thenius
Farrell, Albert LeRoy	27		6 Beaverbrook Pky
Farrington, Wendell Fremont B.Sc.	ss	Livermore Falls, Me.	
Fay, Louise	ss	Waltham	
Feinberg, Hyman Isadore	24		81 Water
Felt, William Norcross	26	Northboro	35 Maywood
Ferguson, John Henry	25		3 Ives
Ferrara, Adam Erminio	25	Newark, N. J.	928 Main
Fitzgerald, John Joseph	26		11 Euclid Ave.
Foley, Gardner Patrick Henry A.B.	Hist g	Gloucester	973 Main
Foley, Harriet Adelaide A.M.	ss		26 Perkins
Foote, Lewis Ford	ss	Holyoke	
Forsberg, Randolph W. A.	25		148 Eastern Ave.
Ford, Elizabeth Mae	ss	Springfield	
Foss, Wesley Blake	25	Springfield	35 Maywood
Friend, Francis Stuart	27	Newton	14 Oberlin
Furber, Mary Anna	ss	Framingham	
Gannon, Thomas Condon	26	New London, Conn.	973 Main
Geer, Gordon Nelson	26		1 Airlie
Geldard, Frank Arthur	26	Lynn	35 Maywood
George, Zelda E.	ss	Galesburg, Ill.	
Germaine, Nellie Clara	ss		10 Comlth. Ave.
Gibbs, Everett Hayward	25	Framingham	
Gilbert, Ralph Wesley	24	Leominster	4 Hancock
Gladding, George Roger	25	Chester, Conn.	87 Florence
Goeller, Edward Ford	27		6 Norwood
Goeller, Robert Bruce	24		6 Norwood
Goldblatt, Leo Arthur	26	Colchester, Conn.	6 Wyman
Graf, Francis Otto	26	New Rochelle, N. Y.	973 Main

Graham, Clarence Henry	27		14	Lewis
Grandone, Peter	25	Oxford	18	Oread
Green, Hyman Howard	27	So. Norwalk, Conn.	6	Wymann
Greer, Willard N. A.M.	F	Richland, Mich.	97½	Hancock
Grenier, Francis Havaden	27		8	Lowell
Grey, Mrs. Edna Lowe	s		110	College
Grey, Robert Munson	Hist g		110	College
Griff, Samuel	26		170	Harding
Griffith, Clifford Ohlin	26		16	Brownell
Guerin, Edmund Leo	ss		34	Shaffner
Hadley, Allan Mathews	26	Hancock, N. H.	7	Hawthorne
Halpern, H. Leon	s	New York, N. Y.	63	Dorchester
Hammond, Arthur Northway	25	Leominster	16	Tirrell
Hammond, Seymour	27	Shrewsbury		
Hannan, James Phillips	24		23	Kingsbury
Hanover, Walter Smith	26	Groton, Conn.	87	Florence
Harada, Taichi A.M.	Chem F	Fukushi, Japan	12	Oberlin
Harris, Honora M.	s	Millbury		
Harris, Otto A.M.	Geog S	Stonefort, Ill.	166	Woodland
Hasegawa, Kametaro	Educ S	Tokyo, Japan	4	Hammond
Hastings, Russell Byron	24		25	Dewey
Hayden, William Walter	26		90	Chatham
Healey, Raymond Francis	25		73	Downing
Hearn, George David A.B.	s		202	Beacon
Hendricks, Jennie Lucy B.S.	ss	Holden		
Herrick, Van Buren	26		59	Pleasant
Higginbottom, Edwin	26	Millbury		
Higgins, Donald Ellwood A.B.	Phys S	Marston's Mills	973	Main
Hoare, Thomas Holton	27	New London, Conn.	973	Main
Hodge, Mrs. Thekla	ss		101	May
Holloran, Carl F.	ss	Fitchburg		
Holmes, Richard Macdonald	ss	Mt. Vernon, N. Y.		
Hood, Everett Wesley	ss 24	Millville	940	Main
Hooper, George Herbert	26	Niagara Falls, N. Y.	9	Hawthorne
Howard, Palmer Peckham A.B.	Hist S	Waterford, Conn.	973	Main
Howe, George Franklin A.B.	ss	Wyandotte, Mich.		
Howe, Helen Alice	ss	E. Orange, N. J.		
Howell, Edna Vesta A.B.	Psy S	Pomeroy, Ohio	28	Shirley
Huang, Tien Chuen	s	Shanghai, China	879	Main
Hunt, Stanley Wallace	26		7	Winslow
Illingworth, Robert Stanley A.B.	ss	Easton, Pa.		
Imlah, Albert Henry A.M.	ss	British Columbia		
Ivok, Leo A.B.	Psy g		54	Beacon
Jackson, Eric Pearson A.M.	Geog S	Fall River, Mass.		
James, Mrs. Dorothy Upham	ss		166	Woodland
Jameson, Harold	27		44	Copperfield Rd.
Johnson, Carl Albert	24		36	Ames
Johnson, Emil B.D.	Psy g		8	Everard
Johnson, Ernest William A.M.	Chem F			Sunderland Rd.
Johnson, Harold Earl	ss		16	Tirrell
Johnson, Katherine Caroline	ss	Brooklyn, N. Y.		
Johnson, Warren Charles A.M.	Chem F	Kalamazoo, Mich.	15	Birch
Jones, Lloyd Charlton	27	Palmer	87	Florence
Jones, Stanley Cochran	ss	Baldwinville		
Josephson, Carl Edward	27		57	Everard
Kalijarvi, Gustave Bernhard	26	Gardner	973	Main
Kelleher, Mrs. Dorothy Bradford	ss		835	Pleasant
Keller, Clarence Wakefield	27	Thomaston, Conn.	35	Maywood
Kelley, Elizabeth Anne	ss	Shrewsbury		
Kelley, Charles B. L. A.M.	Geog F		39	May
Kelley, Donald Sherwood	27	Lawrence	973	Main
Kellogg, Raymond Harold	26	Plainville, Conn.	455	Park Ave.
Keyworth, Edward Cornell	ss	Gardner		
Kilbourne, Herman Wells	27	New Britain, Conn.	973	Main
King, Charles Valentine	24	Hubbardston		
Kirby, Kathryn Theresa	ss	Fiskdale		
Knight, Ella Bartlett A.B.	ss	Omaha, Nebr.		
Komroff, Mrs. Sophie	ss	New Haven, Conn.		
Lagasse, Dexter Leon	ss		16	Dean
Lamb, Wallace Emerson	26	Bolton Landing, N.Y.	16	Shirley
Landin, Harold William	24		131	Malden
Lane, Ralph Arthur A.B.	s		17	Wrentham Rd
Lansdale, Herbert P., Jr. A.M.	s		20	Merrick
Laplante, Mrs. Annis E.	ss	West Brookfield		
Lawton, Willard Elliott M.S.	Chem F		32½	John
Lehtinen, Alice Evelina Elizabeth	ss	Peterborough, N. H.		
Leighton, Ethel Claire	ss		430	W. Nebraska

1 Not in residence, not reg. for any univ credit.

Lessin, Harry	27	So. Norwalk, Conn.	15	Aetna
Levenson, Benjamin A.B.	Hist S		106	Salem
Lindberg, Vitales Lethine	26		32	Uxbridge
Lipschitz, Abraham Maurice	24		45	Barclay
Little, James Guilford	26		3	Chadwick
Loewenberg, Bert James	27	Boston	6	Wyman
Lloyd, Frank Sidney B.P.E.	Psy g	London, England	14	Stoneland Rd
Loomis, Richard Burton	26	Windsor, Conn.	973	Main
Loungway, Ferdinand John	ss 26		5	Lagrange
Lynch, Harold Edward	24		31	Fairhaven Rd
McAuliffe, Daniel Francis	26		23	Charlotte
McBurnie, Sara Page	ss	Peoria, Ill.		
McClusky, Donald Knight	26		7	Hawthorne
McCrea, Paul Gordon	27		30	Shirley
McDonald, Mary V.	s		5	Almont Ave
McFadden, Mrs. Charlotte M.	s		6	Windsor
McKelligett, Marguerite C. A.B.	s	Warren		Normal School
McLean, Francis Thomas	25		119	Pilgrim Ave.
McPherson, Donald Davis	ss		19	Catherine
McQueeny, Theresa Frances	ss		35	Westminster
Mack, Harry Elias A.B.	Educ ss g	Leicester		
Macmillan, Jessie May	ss	Haverhill		
Maeshima, Yutaka	s	Tokyo, Japan		
Maher, Margaret Elizabeth	ss s		766	Pleasant
Masters, Cecil Dana	25		48	King
Matthews, Marietta B. E.	ss		37	Merrick
Mayberry, Florence Blanche	ss	Exeter, N. H.		
Mead, Raymond George	26	Springfield	21	Freeland
Miller, Astrid Emelia	ss		49	Chatham
Miller, Hazel V. A.M.	Geog F	Iowa City, Ia.	59	Downing
Milliken, Harry E.	s		170	King Philip Rd
Miyamoto, Katsuhai	24	Nagasaki, Japan	27	Oberlin
Moore, John Robert	27	Winsted, Conn.	6	Downing
Morrill, Emmet Thaddeus	27	Brockton	19	Shirley
Morrill, Weston B.S.	Chem g		415	Lovell
Morse, Laura Lucile A.M.	Hist F	Arlington	36	Gates
Mountain, Harold Augustus B.H.	Hist g	Ontario, Canada	14	Stoneland Rd.
Mulcahy, K. Cecilia	s		17	Sycamore
Mullany, Catherine Pauline	ss		51	Downing
Murphy, Francis William A.B.	ss	Holyoke		
Murray, Isabel H.	ss		28	Windsor
Murray, John E. A.B.	s		3	Suffield
Neal, Arthur Morrill A.B.	Chem S	W. Boylston		
Necholas, James Constantine	27		140	Exchange
Nelson, Arthur Julius A.M.	Hist g		114	Woodland
Nesbitt, Donald Frederick	25	Chicopee Falls	35	Maywood
Newton, Lawrence Irving	27	Auburn	16	Tirrell
Nicol, Theodore	26		31	Millbury
Nicoll, Robert Geoffrey Black	27	Andover	973	Main
Nuki, Denmatsu	Econ ss S	Hokkaido, Japan	9	Mt. Pleasant
Nute, Harold Alfred	ss s		16	Randolph Rd
Nutting, Howard S.	Chem g	Leominster	147	Highland
O'Bryan, Miles	27	Ft. Scott, Kan.		Carlyle Hotel
O'Connell, Philip C.	ss		227	Burncoat
O'Connor, Delia Gertrude	ss	Spencer		
O'Day, Anna Magdelen	ss	W. Brookfield		
O'Hara, Abigail Loretta	Psy g		20	Vernon
O'Leary, Ellen Josephine A.M.	Psy g		57	Channing
O'Leary, John Burke A.M.	Hist ss g		57	Channing
O'Neil, Helen	ss		98	Vernon
Ott, Mabel Mary	ss	Shrewsbury		
Packard, Leonard O. B.S.	ss	Needham		
Panarity, Gerim Mosa	ss 25		20	King
Park, Bessie Louise	ss	Courtland, N. Y.		
Parker, Hildegard B.M.	ss		3	Fenimore Rd
Partridge, Roland Edward A.B.	ss	Boylston		
Patt, Hermann George B.D.	ss	Auburn		
Peardon, Thomas Preston A.M.	ss	British Columbia		
Pearse, Harry	24	Southboro	18	Shepard
Peirce, Ronald Webster Lincoln	26	Springfield	35	Maywood
Percy, Carl Lisle A.M.	ss	Demorest, Ga.		
Perkins, Ernest Ralph A.M.	ss	Northfield, Vt.		
Perlmutter, Nucia	Educ g	Chicago, Ill.		
Perrault, Normal Henry	26		15	Gates
Perry, William Martland	27	Brockton	78	Elm
Perry, William Clinton	ss s		973	Main
Peters, John Lovett	27	E. Holliston	17	Rockdale
			49	Hitchcock Rd.

Pierrel, Gren Oren A.M.	s	7 Vesper
Pitcher, Thornton Lewis	26	396 Park Ave.
Plante, Marcel Tierney	27	
Platukis, Joseph George	26	23 Marion Ave.
Plumb, Philip Bissell	26	16 Tirrell
Pohlman, Kenneth Ellsworth	26	273 Main
Pomeroy, Howard Edwin BD..	Hist g	75 Othello Rd.
Pooley, Richard Adelbert	27	67 Portland
Pope, Henry William	24	2 Eldred Ter.
Popko, Peter Frank	24	26 Ellsworth
Porter, Gordon Disbrow	27	35 Maywood St.
Potter, Norwood Clarence	24	6 Bishop Ave.
Potts, William Gerald	25	412 Chandler
Pownall, Helen Hannas A.B.	ss	
Preissel, William Frederick	26	87 Florence
Price, Ronald William	24	10 Wayne
Priest, Mrs. Anna	ss	
Quigley, Leon Vincent	Chem g	100 Elm
Quinn, Julia A.	s	4 Wade
Quinn, Mary A.	ss	44 Pleasant
Ratigan, John Edward A.M.	Hist g	10 Lucian
Rawson, Charles Irving	27	
Rayworth, Joseph Charles	27	Oxford
Reddig, Etta Elizabeth	ss	Oakdale
Reed, Mary Emma	ss	Reading, Pa.
Reidy, Edward Philip B.B.A.	Psy ss g	939 Main
Reilly, May	ss	104 Brookline
Reynolds, Paul Everett	25	68 Merrick
Richmond, Eugene	24	16 Shirley
Ridderhof, John Adrian A.B.	Chem S	87 Brookline
Ridgley, Douglas Clay M.S.	Geog ss F	23 Maywood
Ridgley, Florence J.	ss	166 Woodland
Ridgley, Winifred Rosamond	Ph.B.	166 Woodland
Riffolt, Nils August	Geog S	166 Woodland
Riley, Georgia H.	ss 24	7 Shirley Ter.
Riley, Michael Francis	ss	3 Sever
Robertson, Ina Cullom B.S.	ss 24	111 Beacon
Rochette, Roger Mellor	Geog S	2 Woodbine
Roope, Percy Martin A.B.	27	15 Colonial Rd.
Russell, Henry Harrison B.E.	Phys g	15 Shirley
Russell, Joseph Francis A.M.	Geog S	516 Park Ave.
Sabol, George	Hist g	
Sachs, Jacob Yank	s	Grafton
St. Amour, Florence	26	Clairton, Pa.
Salisbury, Jesse Wilder A.B.	ss	New Haven, Conn.
Sanford, Minnie E.	ss	S. Lancaster
Sargent, Warren Russell B.S.	ss	Castleton, Vt.
Saunders, Margaret Jane A.M.	ss	
Saunders, Merrill Richard	Psy F	Worcester Acad.
Saxby, Mrs. Della G.	24	State Hospital
Scannell, Agnes Veronica	ss	716 Pleasant
Scarborough, Ray James A.M.	ss	
Schultz, Isadore Erwin	ss	Marshallfield, Vt.
Schwenning, Mrs. Carrie Heath	24	Chelsea
Schwenning, Gustav Theodore A.M.	ss	Winona, Minn.
	Hist ss F	Springfield
Scott, Abigail F. A.B.	s	Springfield
Sessions, William Vyne M.S.	Chem F	974 Pleasant
Seward, Ralph Pray A.M.	Chem F	15 Birch
Shalloo, Jeremiah Patrick	24	9½ Hancock
Shank, Marjorie Mae A.B.	ss	16 Tirrell
Shaw, G. Eleanor	ss	
Shea, Mary Ellen	ss	9 Almont Ave.
Sheedy, Anna A.M.	ss	3 Forestdale Rd.
Shields, Hazel Deane	ss	
Shipman, Fred Waldo	26	139 Highland
Shor, David Meyer	24	41 Columbia
Shrawder, William Henry	ss	
Silk, Ellen M.H.	ss	Pittsburgh, Pa.
Silverman, Samuel	27	Spencer
Slate, Everett Joseph, Jr. Ed.M.	Educ S	
Sleeper, Lewis Maxwell	25	12 View
Slowick, Joseph Edmund	26	892 Main
Small, Ralph Leslie	26	
Smith, Mrs. Ada Bradford	ss	18 Hartshorn Ave.
Smith, Hampton	26	15 Gates
		Gloucester

Smith, Louis Varance	ss	26		5	Ash
Smith, Sherman Merritt A.M.	Hist F		Syracuse, N. Y.	166	Woodland
Smolensky, Hyman Jerrard	ss			69	Harlem
Springs, James Davis	26		Merchantville, N. J.	4	Hancock
Stedman, Harry Prouty	26		Gardner	973	Main
Stetson, William Clark	26		Oxford	35	Maywood
Storer, Irving Lombard	26			3	Chamberlain Pky
Sullivan, Gertrude M.	s			67	Uxbridge
Sumner, Florence Cleora	ss			360	Salisbury
Surabian, Simon	26		W. Boylston		
Suvoong, Thomas Housing B.P.E.	Educ g		Shanghai, China	4	Englewood Ave.
Swan, Paul Richard	24			56	Holden
Swartz, David	27			48	Barclay
Sweeney, Anne G.	s			11	Plantation
Tabor, Osborne B.	27		Southbridge	19	Shirley
Tanner, Elmo	24			9	Hawthorne
Tarlov, Isadore Max	26		S. Norwalk, Conn.	6	Wyman
Tashjian, John	26		Brockton	14	Maywood
Templeton, Cora Lee Ph.B.	ss		Santa Barbara, Cal.		
Thompson, George R. A.B.	Hist ss g		Leominster	23	Seymour
Tierney, Thomas Joseph	26			272	Burncoat
Tomajan, Russell	27			16	Tirrell
Toomey, John Joseph	26		Springfield		
Torigoya, Kazutaro	ss		Okayamaken, Japan		
Towne, Edmund Barber	24		Stafford Spgs, Conn.	16	Tirrell
Towne, Harold Goodell	26		Stafford Spgs, Conn.	16	Tirrell
Towne, Stanwood Bartlett Eugene A.B.	Chem S			20	McKinley Rd.
Vail, Anna Frances	ss		New Bedford		
Varney, Burton Merrill A.M.	Geog F		Berkeley, Cal.	131	Lovell
Ward, Anna Howard	ss		Augusta, Ga.		
Ware, Amy E.	ss		Salem		
Washburn, Laura A.	ss		Schenectady, N. Y.		
Waterman, Doris A.	ss			234	Chandler
Watson, Eleanor Blanche	ss		Peoria, Ill.		
Weber, Henry	s		Lakewood, N. J.	940	Main
Weed, Bester Cicero	26			7	Cutler
Wesson, Robert Shaw	27			4	Trinity Ave.
White, Helen Margaret	ss		Washington, D. C.		
White, Lester Perrine A.B.	Econ S		Brooklyn, N. Y.	57	Hollywood
Whittemore, Earle Bennett	26			46	Baker
Willard, Lottie Jane	ss		Whitinsville		
Williams, Gertrude Edith A.B.	ss s			4	Orne
Williams, John Lincoln A.B.	Hist g			10	Beaconsfield Rd.
Winslow, Guy Herbert	ss		S. Lancaster		
Winslow, Harry Edward	27		Clayton, N. Y.	973	Main
Wooster, Charles Bushnell	24		Deep River, Conn.	940	Main
Yanofsky, Jacob Isador	24			63	Harlem
Young, Richard Ellsmore	27			30	Dewey
Zarrow, Harry	27		Millbury		

Summary 1923-24

Undergraduates		184
Freshmen	53	
Sophomores	72	
Juniors	21	
Seniors	38	
Graduate Students		70
Full time	46	
Part time	24	
Special Students		43
Summer School Students (1923)		135
		<hr/>
Total		432
Deduct (counted twice)		21
		<hr/>
Net Attendance		411

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MARCH, 1924

Summer School Number

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November, and December

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Calendar

July 7	Monday	8 a. m. Registration begins 12 m. Opening Assembly 8-10 p. m. Reception to Members of the Summer School by President and Mrs. Atwood, at the President's House
July 8	Tuesday	8 a. m. Lectures and Recitations begin
July 12	Saturday	Field Trip under the direction of President Atwood
July 19	Saturday	Field Trip under the direction of President Atwood
Aug. 2	Saturday	Trip to Walden, Concord, and vicinity, under the direction of Professor Dodd
Aug. 15	Friday	Work of the Summer School ends

A course of ten Public Lectures (titles to be announced) will be given on Tuesday and Thursday evenings from July 10 to August 12.

Committee of the Faculty on the Summer School

THE PRESIDENT OF THE UNIVERSITY

THE DIRECTOR OF THE SUMMER SCHOOL

MESSRS. BLAKESLEE, MELVILLE, RIDGLEY

Schedule of Lecture and Recitation Hours

INSTRUCTOR	8	9	10	11	12	Afternoon
ATWOOD				Geography 11	Geography 21	Geography 30†
BARKER	Geography 26		Geography 25			
BRANDENBURG	Economics 2	Economics 1		Geography 11	Geography 21	Geography 30†
BROOKS				Geography 17	Geography 23	
CASE		Geography 15	French 6	French 7		
L. L. Atwood CHURCHMAN						
DODD		English 4				
HARLOW			History 17	History 16		
HODGE		German 2	German 1			
ILLINGWORTH				English 5		
LANGER		History 15	History 14			
MURCHISON			Psychology 1	Psychology 2		
PEATIE			Geography 29			
RIDGLEY	Geography 18	Geography 28				

NOTE. All the above courses are Summer School courses. The symbol "SS" before the numeral, which distinguishes courses in the Summer School from those given during the regular academic year, is omitted. †Wednesday at 3.

The Summer School at Clark University

The Summer School as a department of the American institution of higher learning has developed largely within the last thirty-five years. Clark University was among the pioneers in this line, holding its first summer session thirty-two years ago, in 1892.

The early Summer School at Clark University was unique in confining the work of the entire session to a period of two weeks of intense application. The plan was "to fill each hour and each day as full of instruction and opportunity and each lecture as full of illustrations as possible." Lectures were held both in the forenoon and in the afternoon, and on several evenings. Instruction was given for the most part by professors and heads of departments. The program of subjects offered varied from Psychology and Pedagogy alone to Psychology, Philosophy, Pedagogy, Mathematics, Physics, Biology, and Anthropology; but after the first three sessions the work of the school was practically limited to Psychology and allied subjects. The sessions began about the middle of July, and there were nine under this plan, the last in the summer of 1903.

In 1920-21, along with the reorganization of the University under President Atwood, plans were formed for opening the institution for a six weeks' summer session in July and August. While the new Summer School was designed along conventional lines, it was decided not to attempt to offer work in all departments, thus seemingly entering into general competition with other excellent Summer Schools in New England, but to concentrate on a few subjects in which the University seemed especially fitted to give summer instruction.

SUBJECTS OF INSTRUCTION

As is well known, Clark University is now laying very especial emphasis on the study of Geography, and in that department of the Summer School the most varied and extensive program of courses will be found. It is believed that a program of courses in Geography as extensive as that presented here will not be found this year in any Summer School east of Chicago.

Courses are offered for the coming session also in the allied

departments of History, Economics, and Psychology. In addition to courses in Geography and allied departments the Summer School intends to provide at each session as many courses for students whose interests lie outside these fields as the facilities of the University for giving summer instruction will permit. Such courses are offered for the summer of 1924 in English, French, and German.

While no specific additions to the program of courses here announced are contemplated, requests from prospective students for work in subjects not announced will be carefully considered, and the organization of one or more extra courses is within the range of possibility.

The work of the Summer School is intensive, and courses meet five times a week. Enrolment in three courses is considered a full program, and many students, it is believed, will find it advantageous to concentrate all their energies on the work of two courses or even a single course.

LOCATION AND BUILDINGS

Clark University occupies a tract of ground lying between Main and Woodland and Maywood and Downing Streets in the city of Worcester, situated about a mile and a quarter from the City Hall, on one of the principal trolley lines. Some cars run directly from the Union Station past the University; other cars make connections at the City Hall with cars running south on Main Street which pass the University.

Besides the campus with the academic buildings proper, the University owns a small athletic ground between Maywood and Beaver Streets, the Dining Hall and some unoccupied land at the corner of Woodland and Charlotte Streets, and the Hadwen Arboretum, on Lovell Street, about twenty acres in extent.

The office of the Summer School is located in the Main Building, which contains also the general offices of the University, as well as the administrative offices of the Collegiate Department. In the Main Building are the Assembly Hall and many of the lecture and recitation rooms, and in this building most of the exercises of the Summer School are held. The office of the President of the University is in the Geography Building.

In the Science Building are located the lecture rooms and laboratories of the departments of Physics and Chemistry.

All the classroom, library, and laboratory facilities of the University, so far as they pertain to the subjects of instruction offered, are at the disposal of students of the Summer School.

THE LIBRARY

The Library of the University was provided with a generous endowment by the founder of the institution, and affords especially favorable opportunities for study and research. It occupies a large and handsome building at the corner of Main and Downing Streets. The Library now owns more than 105,000 bound volumes and pamphlets, and the Reading Room receives more than 500 journals. All the privileges of the Library are open to all members of the University, and each member has direct access to every book and journal.

In addition to the library facilities provided by the University, students may avail themselves of the privileges of other excellent libraries in the city. The Worcester Public Library contains some 245,000 volumes and makes accessible to the public about 600 newspapers and magazines. The educational books in the Circulating Department of the Public Library have been grouped together in a corner of the Delivery Room, where they may be inspected by persons interested. Teachers' magazines, with other interesting pedagogical material, may be consulted in the Children's Department and in the General Magazine Reading Room. The Library of the American Antiquarian Society, housed in the national headquarters of the Society in Worcester, contains more than 148,000 volumes, and some 223,600 pamphlets. In addition to the Society's valuable manuscripts of the colonial period, it has an unequaled collection of books printed in America in the early period, and of American newspapers from 1660 to 1860.

ADMISSION TO THE SUMMER SCHOOL

Graduates of colleges, technical schools, normal schools, or secondary schools, college students, and teachers in schools of any grade are admitted as a matter of course upon application. Other applicants are admitted upon approval of their qualifications for the work which they desire to do.

REGISTRATION

Persons who desire to enter the Summer School should detach and fill out the application form which is printed at the end of this BULLETIN and forward it, with the registration fee of two dollars, to the Registrar of Clark University. The amount of the registration fee will be deducted from the tuition fee when the latter is paid. Checks should be made payable to the Bursar of Clark University.

It is exceedingly desirable that the registration of all students in all courses be completed on July 7. To this end students should as far as possible determine before the opening of the session through personal conference or correspondence with the Director or the various instructors the courses in which they expect to register.

Formal registration will begin Monday, July 7, at 8 a. m., in the Main Building. The opening assembly of the Summer School will be held in the Assembly Hall July 7 at 12 o'clock. Class work will begin promptly on Tuesday morning.

CREDIT FOR WORK DONE

Some of the courses of instruction in the Summer School are of college grade, others are strictly graduate courses, and many are open both to graduate students and to undergraduates. The satisfactory completion of a course entitles the student to credit of two semester hours,* which the Summer School will designate as undergraduate or graduate credit as the case may be.

Credit earned in the Summer School may be applied toward the fulfillment of the requirements for the degrees of Bachelor of Arts or Bachelor of Education** or the graduate degree of Master of Arts, in accordance with the general regulations of the University governing candidacy for these degrees.

Attendance at four sessions of the Summer School will ordinarily be considered as fulfilling the residence requirements for the degree of Master of Arts, provided the student devotes his

*When the new Summer School was organized, in 1921, it was thought that with constant insistence upon intensive effort enough ground could be covered in six weeks to warrant a credit of three hours per course, the regular amount of credit given in Clark College for the completion of a semester course meeting three times a week. An examination of the practise of other Summer Schools indicates that the amount of credit given by the best Summer Schools throughout the country for a course requiring an hour a day of classroom work five times a week for six weeks is two hours rather than three, and it has not seemed advisable, after careful consideration, to continue a practise which, without regard to its intrinsic merit, must sooner or later call our standard of awarding credit into question.

**The detailed requirements for this new degree for teachers, which was established by the University in the fall of 1923, are published in the General Catalogue for 1923-24, pp. 71-72, and may be had separately upon application to the Registrar of the University for BULLETIN 24.

The degree is designed for teachers, both men and women, who are unable to enter undergraduate classes during the regular academic year, but who are enrolled in the summer session or attend Saturday classes or other courses open to them under the regulations of the institution. It corresponds to the degree of the same name given by Brown University and to the degrees of Associate in Arts and Bachelor of Science in Education given by Harvard University and Boston University respectively.

To secure this degree the attainment of 120 hours of college credit is required, for 54 hours of which the completion of the standard two-year course in a Massachusetts State Normal School may usually be counted. At least 30 semester hours of credit must be earned in residence at Clark University, either during sessions of the Summer School or during the regular academic year.

entire time during the sessions to graduate work. A thesis is required in addition to work done in courses. The degree of Doctor of Philosophy can not be secured by summer work alone.

A certificate, with a statement of work done and credit awarded, will be furnished at the close of the session to all students who desire it.

Work done in the Summer School can be counted toward the fulfillment of the requirements for degrees in the Graduate and Undergraduate Divisions of the University only by students who have fulfilled the regular requirements for admission to candidacy for those degrees.

TUITION

Students taking two or more courses will pay a fee of thirty-five dollars; those who desire to take but one course may do so upon payment of a fee of twenty dollars, which will entitle them also to all the special privileges of the Summer School. The same charge is made for courses taken by students as auditors as for courses taken for credit.

Students registering in the Summer School who have not previously been enrolled in the Summer School or in some other department of Clark University are required to pay the University matriculation fee of five dollars. This fee need not be paid again by students who return for subsequent summer sessions, or who at any later time take up at Clark University the work of the regular academic year.

Tuition may be paid at any time before the opening of the session, and must be paid by noon of Saturday, July 12. Checks should be made payable to the Bursar of Clark University.

BOARD AND ROOMS

The University Dining Hall is open during the session of the Summer School, and will provide table board this summer at eight dollars per week. Furnished rooms in the vicinity of the University may be secured at rates running from three dollars a week up. The Faculty House, on Woodland Street across from the University, and one or more of the college fraternity houses will probably be available for the accommodation of a limited number of Summer School students.

OUTSIDE ACTIVITIES

It is the intention of the Summer School not only to provide a daily program of serious work, but to afford to students and instructors opportunities for relaxation and enjoyment as well.

Among these are courses of public lectures, entertainments, and excursions to places of scientific or historic interest. The working schedule has been planned so that those who desire to take advantage of the excursions or to visit Boston or other neighboring cities at week-ends may do so without detriment to their regular work.

The University Gymnasium and the Maywood Street athletic ground provide opportunity for both indoor and outdoor exercise. The summer climate of Worcester is pleasant; periods of excessive heat are rare; and Lake Quinsigamond, at the edge of the city and easily accessible by trolley, offers excellent facilities for boating and canoeing. Coes Pond, within easy walking distance of the University, is a favorite resort of summer bathers.

PUBLIC LECTURES

Two courses of lectures, open to members of the Summer School without extra cost, are given on Tuesday and Thursday evenings at eight o'clock. Last year these courses included two lectures by President Atwood and one by former President G. Stanley Hall, while other lectures were given by Rabbi Louis Mann, of New Haven, and by Messrs. Brooks, Dodd, Ridgley, Robinson, and Young, of the Summer School staff. The program of lectures for the coming summer will be announced before the opening of the School.

For persons not members of the Summer School the price of a ticket of admission to all the lectures of the Tuesday and Thursday evening courses is five dollars; to all the lectures of either course, three dollars; to single lectures, seventy-five cents.

EXCURSIONS

Saturday excursions conducted by members of the Summer School staff have proved enjoyable features of past sessions. In the summer of 1922 two trips were taken under the direction of the Department of Geography. In July a party went to Mount Tom by automobile, stopping at points along the way for physiographic observation and comment, and inspecting dinosaur tracks near the Connecticut River. Later another automobile party travelled to the base of Mount Monadnock, stopping en route to examine glacial deposits. Meteorological observations were taken continuously during both trips, and physiographic and meteorological talks were given each time on top of the mountain. The return trip from Mount Monadnock was made by way of Harvard, Mass., where President and Mrs.

Atwood entertained the party at supper at their summer home. Members of the School in 1923 will remember with pleasure the two days' excursion to Provincetown and the Cape. For the coming session two trips are planned by the Department of Geography, while the Department of English will conduct an excursion to historic Concord and its vicinity.

DRAMATICS

The dramatic exhibitions given by the class in English 5 are among the pleasantest features of the session. In 1922 they included Synge's *Riders to the Sea* and Lady Gregory's *The Workhouse Ward*, Shaw's *Candida*, and an outdoor performance of a series of scenes from Shakespeare; last summer the class presented Houghton's *The Dear Departed*, Alice Brown's *Joint Owners in Spain*, Oliphant Down's *The Maker of Dreams*, and Milne's *Mr. Pim Passes By*, and gave an outdoor performance on one of the evenings just preceding the close of the session.

THE SUMMER SCHOOL ASSOCIATION

For much that makes life about the University enjoyable during the summer session the School is indebted to the efforts of the Summer School Association, which was organized in 1921, and has for one of its prime objects the promotion of the School's social activities. Besides arranging dances and other social entertainments, the Association instituted an Annual Musicales last summer. It has held three annual reunions at the University in the winters between sessions.

THE SUMMER SCHOOL ROSTER

The names of students of the Summer School, with their home addresses, will be found in the General Catalogue of the following academic year, along with those of students in the Graduate and Undergraduate Divisions of the University.

Officers of Instruction and Administration

- WALLACE WALTER ATWOOD, PH.D. Geography
B.S., University of Chicago, 1897; Ph.D., 1903. President of Clark University and Director of the Graduate School of Geography.
- CHARLES BREWSTER RANDOLPH, PH.D. Director
A.B., Wabash College, 1896; A.M., Harvard University, 1902; Ph.D., 1905. Professor of German, Clark University.
- WILLIAM HENRY BARKER, B.Sc., F.R.G.S., F.R.A.I. Geography
Head of the Department of Geography, University of Manchester, England.
- CHARLES FRANKLIN BROOKS, PH.D. Meteorology and Climatology
A.B., Harvard University, 1911; A.M., 1912; Ph.D., 1914. Associate Professor of Meteorology and Climatology, Clark University.
- DOUGLAS CLAY RIDGLEY, M.S. Geography
A.B., Indiana University, 1893; M.S., University of Chicago, 1922. Professor of Geography, Illinois State Normal University, 1903-22. Lecturer in Geography, Clark University.
- EARL CLARK CASE, B.ED. Geography
B.Ed., Illinois State Normal University, 1915. Assistant Professor of Geography, University of Cincinnati.
- RODERICK PEATTIE, PH.D. Geology
S.B., University of Chicago, 1914; Ph.D., Harvard University, 1920. Assistant Professor of Geology, Ohio State University.
- WILLIAM LEONARD LANGER, PH.D. History
A.B., Harvard University, 1915; A.M., 1920; Ph.D., 1923. Assistant Professor of European History, Clark University.
- RALPH VOLNEY HARLOW, PH.D. History
A.B., Yale University, 1909; A.M., 1911; Ph.D., 1913. Assistant Professor of History, Boston University.
- SAMUEL J. BRANDENBURG, PH.D. Economics
A.B., Miami University, 1904; Ph.M., University of Chicago, 1909; Ph.D., University of Wisconsin, 1922. Professor of Economics and Sociology, Clark University.

CARL MURCHISON, PH.D.

Psychology

A.B., Wake Forest College, 1909; Ph.D., Johns Hopkins University, 1923. Professor of Psychology, Clark University.

LORING HOLMES DODD, PH.D.

English

A.B., Dartmouth College, 1900; A.M., Columbia University, 1901; Ph.D., Yale University, 1907. Professor of Rhetoric, Clark University.

ROBERT STANLEY ILLINGWORTH, A.B. English and Dramatics

A.B., Clark College, 1917. Student, American Academy of Dramatics, 1917-18. Professor of Public Speaking and Director of Dramatics, Lafayette College.

Island v. Steward

~~*PHILIP HUDSON CHURCHMAN, PH.D.~~

French and Spanish

A.B., Princeton University, 1896; A.M., 1903; Ph.D., Harvard University, 1908. Professor of Romance Languages, Clark University.

A.B., Clark, 1916.

THEKLA E. HODGE

German

Head of the Department of Modern Languages, Athol High School.

CAREY EYSTER MELVILLE, A.B.

Registrar

A.B., Northwestern University, 1901. Associate Professor of Mathematics and Registrar, Clark University.

FLORENCE CHANDLER

Bursar

DOROTHY ANNETTE DUGGAN

Secretary to the Director

*See NOTE after description of French 7, on page 22.

Courses of Instruction

Courses marked with an asterisk may be taken for graduate credit.

GEOGRAPHY

The courses in geography announced here are planned for college students working toward the degree of Bachelor of Arts, as well as for candidates for the degrees of Bachelor of Education or Master of Arts, and include various undergraduate and graduate courses in the several phases of the subject. Certain fundamental courses will be presented every summer, while others will be given every other year. At any summer session, however, courses not regularly planned for that summer may be given if there is a demand and if a reasonably large class is assured. Special courses will be announced from time to time.

SS11. ELEMENTARY GEOGRAPHY AND CLIMATOLOGY. An introductory study of the relations between man and the elements of the natural environment. The course aims to develop a clear conception of environmental elements, such as climate, land-forms, soils, surface, underground waters, mineral deposits, and native vegetation, and to show the various adjustments of people to them. The study of climatology includes the following major topics: The daily weather as units of climate; the climatic elements; how climatic data are obtained; phenology—life-responses to the progress of the seasons; reduction and graphical presentation of climatic data; the physical basis of climate; solar climate; continental climates; changes of climate; and a brief summary of the climates of North America and their homoclimes.

Daily, except Saturday, at 11. MESSRS. ATWOOD AND BROOKS

SS15. ECONOMIC AND COMMERCIAL GEOGRAPHY. A study of production and distribution as influenced by natural environment. The outstanding influence of climate, soil, topography, location, and earth resources on the production of trade in the more important commercial products of farm, range, mine, factory, and sea.

Daily, except Saturday, at 9.

MR. CASE

SS17. GEOGRAPHIC INFLUENCES IN THE HISTORY OF THE UNITED STATES. The relations between earth conditions and earth resources on the one hand, and the settlement and development of the country on the other; the adjustment of the people to a varied and changing environment from the time of the earliest settlement until the last frontier was gone; the adjustments made necessary because of the disappearance of the frontier.

Daily, except Saturday, at 11.

MR. CASE

*SS18. GEOGRAPHY IN EDUCATION FOR SPECIAL TEACHERS. A general view of geography in the elementary school, normal school, college, and university. Opportunity for each member of the class to work out plans for teaching or supervision in fields of special interest, with special reference to the work of next school year. A study of the geography equipment at Clark University in relation to the needs of members of the class. Problems of making courses of study for individual use or for a school system. A few illustrative field lessons. The library and geography workroom are well equipped for pursuit of this course.

Daily, except Saturday, at 8.

MR. RIDGLEY

*SS21. PHYSIOGRAPHIC REGIONS AND CLIMATOLOGY OF NORTH AMERICA. The course will include a discussion of the fundamental principles underlying the subdivision of the continent into geographic regions, and a description of each of the major regions. The physical geography will be emphasized, and the evolution of the land-forms in each of the regions will be presented. Consideration will also be given to the human response to the physical or physiographic conditions in each of the regions within the continent. The major controls of the climate of North America will be studied, with illustrations from the recent seasons, and the climatic regions and climatically controlled sub-regions will be discussed. Emphasis will be placed on the oceanic factor in our climates, especially on the major part played by the Gulf of Mexico and the Gulf Stream in controlling the seasonal character and climates of eastern North America.

Daily, except Saturday, at 12. MESSRS. ATWOOD AND BROOKS

*SS23. ECONOMIC GEOGRAPHY OF NORTH AMERICA. A study of the continent of North America by natural regions, based on the outstanding features of natural environment and the consequent economic responses; the principal economic activities of the people of each region as related to position, climate, earth

features, and earth resources. The central viewpoint in the treatment of each region is the human response to physical environment.

Daily, except Saturday, at 12.

MR. CASE

*SS25. GEOGRAPHY OF THE BRITISH ISLES. The course will open with a discussion of the physical basis for the beginnings of British history, and will include a full discussion of the geographic influences in the establishment of certain mediaeval towns, the industrial and agrarian evolutions, and British commercial life. Regional studies of agricultural England will include a consideration of London Basin, Hampshire (Wessex) Basin, the Weald, East Anglia, Oxford Basin, Fenland, South-west England, Severn Valley. The regional studies of industrial England will include the distribution of coal, Northeast England, West Riding of Yorkshire, Sheffield and the Erewash Valley, South Lancashire, and the Black Country. Wales, Scotland, and Ireland will also be duly considered from the geographical point of view.

Daily, except Saturday, at 10.

MR. BARKER

*SS26. SPECIAL STUDIES OF TROPICAL AFRICA. The problems confronting the white people in the development of the tropics are among the most significant in the problems of world economics today. The great forests and extensive grasslands, and the lowlands suitable for sugar, rubber, and fruit plantations are all of vital significance in the production of raw materials and of food supplies for the ever increasing populations in the north temperate zone. This course will be based upon a careful consideration of a number of such open problems.

Daily, except Saturday, at 8.

MR. BARKER

SS28. THE TEACHING OF GEOGRAPHY IN THE ELEMENTARY SCHOOL. An examination of recent courses of study. Methods of presentation suitable for elementary school and junior high school, including the problem method and project method. Standard equipment for geography teaching. Local field lessons and their application to the various grades. Wide library reading; consideration of the effective use of pictures, maps, and printed matter in the geography textbook. The library contains an extensive collection of recent books for teacher and pupils, and the geography workroom offers exceptional opportunities for the

making of maps for classroom use. Students should bring with them the textbooks used in their schools.

Daily, except Saturday, at 9.

MR. RIDGLEY

SS29. INTRODUCTION TO GENERAL GEOLOGY. The fundamental geologic processes in the interpretation of the earth's history; the work of weathering, erosion by streams, glaciation, shore line activities, the growth and destruction of mountains, vulcanism and diastrophism; the origin of rocks and the salient features of earth history; a scientific analysis of scenery as a basis for the study of environmental influences. Field excursions will be made, and special attention will be paid to the geology of New England.

Daily, except Saturday, at 10.

MR. PEATTIE

*SS30. SEMINAR IN GEOGRAPHY. Discussions for graduate students of geography; review of recent publications. Reports on thesis work.

Wednesday, at 3.

MESSRS. ATWOOD AND BROOKS

*SS31. RESEARCH IN REGIONAL GEOGRAPHY. For students who are prepared and ready to undertake thesis work in partial fulfillment of the requirements for a graduate degree.

Hour to be arranged.

MR. ATWOOD

*SS32. RESEARCH IN CLIMATOLOGY. For students who are prepared and ready to undertake thesis work in partial fulfillment of the requirements for a graduate degree.

Hour to be arranged.

MR. BROOKS

FIELD WORK IN NEW ENGLAND AFTER THE SUMMER SCHOOL

Tentative plans have been made for a field course in geography immediately following the Summer School, in which about twenty persons can be accommodated. The journey will be made by automobile touring bus, leaving Clark University on Saturday morning, August 16, the day following the close of the Summer School, and returning two weeks later, Friday, August 30, thus allowing time for members of the party to return to their schools early in September.

The trip will cover more than a thousand miles of travel. The route will be from Worcester through Providence, New Haven, Hartford, Springfield, the Berkshires, Rutland, Burlington, Montpelier, White Mountains, Saco Valley, Portland, Ports-

x Trip carried thru as planned - registration^[17] involved for most matriculation not required of ~~some~~ those who came for trip took no other work in SS.
Credit for entire group recorded treated as "Home Study"

mouth, Gloucester, Salem, Marblehead, Lynn, Boston and suburbs, the famous Wayside Inn, to Worcester. Plans for the course will be completed early in the summer session, but interested persons should write at an early date for further information or for enrollment to MR. DOUGLAS C. RIDGLEY, Clark University, who will accompany the party and direct the geographical work. The cost of transportation is estimated at not more than \$50; hotel expenses, including meals, at about \$60; the tuition fee will be \$15.

The Summer School will grant credit up to three semester hours for work satisfactorily completed in this course. Two semester hours will be granted for satisfactory work and field notes prepared during the trip, and an additional hour for a satisfactory written report of the trip, prepared according to directions furnished by the instructor and submitted on or before December 1, 1924.

A FIELD TRIP IN EUROPE

to be carried out
Arrangements for a European Field Trip for teachers and students under the auspices of the Clark University School of Geography are under way. It is planned to spend five weeks in study of the British Isles and four weeks in France, with a brief tour of the low countries.

Members of the party will be enrolled as students in the Summer School, and regular Summer School credit up to six semester hours will be granted to those who meet the requirements of the supervisor of the course, who will be designated by the University. Work for academic credit will, however, be entirely optional with those who make the trip.

A special circular describing the trip has been prepared, and may be had, together with further particulars, upon application to MISS AMY E. WARE, Head of the Geography Department, State Normal School, Salem, Mass.

HISTORY

*SS14. THE HISTORY OF RUSSIA SINCE THE ACCESSION OF ALEXANDER I. The course will deal with the international problems of Russia's history since the beginning of the 19th century, but chief emphasis will be placed on the internal development of the country. Serfdom and the evolution of the land question, the growth of the revolutionary movement, nihilism and the crisis of 1905-1906, the attempt to establish a constitutional govern-

ment, the collapse of Russia during the World War, the revolution of March 1917, the victory of the Bolsheviki and the history of Russia under the Bolshevik regime will all be treated in detail.

Daily, except Saturday, at 10.

MR. LANGER

*SS15. THE DEVELOPMENT OF THE EUROPEAN SITUATION SINCE THE TREATY OF VERSAILLES. The course will attempt to give the student some understanding of some of the great issues confronting Europe and the world at the present time. The internal problems of the principal countries will be taken up and a particular study will be made of the various new states and the difficulties they are facing. On the other hand particular attention will be given to some of the chief questions of international relations, such as the gradual break-up of the Anglo-French Entente, the Ruhr problem, the Little Entente, the Mediterranean policy of the new regime in Italy (with particular reference to the Corfu incident), and the questions arising from the revival of the Ottoman Empire.

Daily, except Saturday, at 9.

MR. LANGER

*SS16. THE RECENT HISTORY OF THE UNITED STATES, 1865-1923. The course will emphasize the outstanding developments in the history of the United States since the Civil War. It will begin with a summary of the forces which created the "new nation": reconstruction, the settlement of the West, and the "economic revolution." Attention will be called to the rise of new economic and social problems, and to the effect of these upon politics. Various reform movements will be discussed, especially the "agrarian crusade." The course will trace out the rise of the United States as a world power, the entrance into the European War, and the conduct of the peace negotiations. Reference will be made to Latin-American interests, and to the present political situation. Lectures, readings, and reports.

Daily, except Saturday, at 11.

MR. HARLOW

*SS17. THE AMERICAN COLONIES AND THE REVOLUTION, 1607-1783. The course aims to present in brief outline the essential steps in the establishment of the English settlements in North America, in the growth of the colonies themselves, and in the War for Independence. Emphasis will be laid upon the economic and institutional aspects of Colonial development, and upon the evolution of the British system of regulation and control.

The effects of the Seven Years' War upon the colonists will be discussed in greater detail, and the forces leading up to the Revolution will be carefully analyzed. Students will have an opportunity to become acquainted with the works of the outstanding modern authorities in this field. Lectures, reading, and reports. *Daily, except Saturday, at 10.* MR. HARLOW

ECONOMICS

SS1. PRINCIPLES OF ECONOMICS. This course attempts to introduce the student to an understanding of the human activity and the social processes which are directed towards the end of gaining a living. It attempts to understand the theory underlying the production of economic goods, to see how these goods are valued in a complex economic society, and how their prices are fixed. It calls attention to various aspects of our economic specialization, our growing economic interdependence, and our increasing associated effort in the endeavor to augment the supply of economic goods. It gives some attention to the technical and administrative organization of business enterprises; to the financial and banking systems which supplement these enterprises; to the transportation system, which is essential to the smooth functioning of these activities; to the various factors and groups of individuals that participate in productive activities; and to the share of the product which each factor or group may rightfully expect as a reward to its efforts.

Daily, except Saturday, at 9.

MR. BRANDENBURG

SS2. ECONOMIC HISTORY OF THE UNITED STATES. This course takes up a study of the economic influences operative in our territorial and population growth. Attention is given to the beginnings of our industrial and commercial activities, the migrations of peoples and industries to new regions, the opening up of the West, our land and agricultural policies, the establishment of commercial farming, the exploitation of our natural resources, and to our increasing economic dependence on nations and regions outside our continental borders. More detailed attention is given to recent changes and improvements in technical methods, to the sources and utilization of raw materials, the use of by-products, to the specialization of industry, to the growth of larger business units, of government regulation, of our recent tariff and monetary policies, and of our rapidly growing economic interests outside our own borders.

Daily, except Saturday, at 8.

MR. BRANDENBURG

PSYCHOLOGY

SS1. EDUCATIONAL PSYCHOLOGY. The student will be introduced to the problem of individual differences in native equipment, and the importance of those differences to the technique and ideals of the educative processes.

Daily, except Saturday, at 10.

MR. MURCHISON

*SS2. MENTAL MEASUREMENTS. Introduction to the historical development of mental testing, the technique of administering the better known tests, and the problems that are involved in the interpretation of the quantitative results.

Daily, except Saturday, at 11.

MR. MURCHISON

ENGLISH

SS3. MODERN VERSE. A study of the best English and American verse since 1900. Original verse or critical papers required.

Hour to be arranged.

MR. DODD

SS4. MODERN DRAMA IN ENGLISH. A survey of the entire field of modern drama, English and foreign. Daily reports and discussion. Critical papers or a one-act play required.

Daily, except Saturday, at 9.

MR. DODD

SS5. DRAMATICS. Amateur and educational dramatics in schools and colleges. The selection and staging of plays; the building of scenery; stage make-up. During the course at least one public performance will be given; rehearsals will be conducted during the regular periods by members of the class. The work will through conferences be directed to meet the individual needs of the students.

Daily, except Saturday, at 11.

MR. ILLINGWORTH

SS9. SHAKESPEARE. An intensive study of six of the plays of Shakespeare. Attention will be paid to dramatic technique and to the drama as an interpretation of life. Dramatic readings in class with emphasis on impersonation.

~~*Hour to be arranged.*~~ 8

MR. ILLINGWORTH

SS10. BROWNING. An intensive study of the poetry of Browning. The study also of the best biographical and critical material concerning him.

~~*Hour to be arranged.*~~ 10

MR. DODD

SS11. MODERN LITERATURE. A survey of modern literature including short story, novel, essay, and verse.

~~Hour to be arranged.~~ 12

MR. ILLINGWORTH

NOTE. Four of the courses above will be given: 4 and 5; and 3 or 10, 9 or 11, according to the number of students registering.

FRENCH

SS6. PRONUNCIATION AND CONVERSATION. An advanced study of pronunciation upon a phonetic basis, together with conversation and other oral drills. An elementary knowledge of French is assumed, but the elements of grammar will be reviewed according to the direct method. This course is not open to beginners.

Daily, except Saturday, at 10.

MR. CHURCHMAN

SS7. ADVANCED SYNTAX. Rapid review of French grammar and composition, with as much advanced work as circumstances may justify. Holbrook's *Living French* will be used as a basis for the work, with reference to other standard authorities. A good knowledge of the elements of the language is assumed.

Daily, except Saturday, at 11.

MR. CHURCHMAN

NOTE. If a sufficient demand should manifest itself, one or more of the following courses may be offered, either in place of those mentioned above, or in addition: Elementary French, Intermediate French, Elementary Spanish, Aims and Methods of Teaching Modern Languages.

As this issue of the BULLETIN goes to press there is some doubt as to whether or not Professor Churchman will be in Worcester during the summer session. In case of his absence the work in French will be in charge of some other competent instructor.

GERMAN

SS1. ELEMENTARY GERMAN. Rapid survey of grammar essentials; writing of easy sentences to fix forms and the principles of syntax in the mind; reading of simple prose. A course designed especially for mature students who can give a very large share of their time during the session to this work. The right is reserved of withdrawing the course if elected by less than ten students.

Daily, except Saturday, at 10.

MRS. HODGE

SS2. GRAMMAR REVIEW AND READING OF GERMAN PROSE.

This course is designed to meet the needs of students who have some knowledge of German and who wish to increase their ability to read with accuracy and ease. The reading will be accompanied by a systematic review of the essentials of grammar, with much oral and some written practice. The works read will depend on the ability and needs of the members of the class. The right is reserved of withdrawing the course if elected by less than ten students.

Daily, except Saturday, at 9.

MRS. HODGE

Graduate of what Normal, Preparatory, or High School, with date of Graduation

Teacher at what Educational Institution at the present time

Student at what Educational Institution at the present time

Tentative List of Summer School Courses which Applicant desires to enter

(Describe by Subject and Number, i. e. Geography 1)

If you are not a graduate of a college, technical, normal, or secondary school, not a college student, and not a teacher, send a letter with this application stating your qualifications for the work which you desire to do.

REGISTRATION FORM

Students at previous sessions of this Summer School need furnish only name and address and tentative list of courses desired.

Please do not write above this line

To the Registrar of Clark University:

I wish to be enrolled as a student in the Summer School for 1924, and enclose with this the Registration Fee of two dollars.

Name

Address

Date

Occupation between June 1, 1923, and June 1, 1924

.....

.....

Academic Degrees, Dates, and Institutions at which received

.....

.....

.....

Clark University

Worcester, Massachusetts



S

FIAT LUX

1924

Clark University

Clark University offers, at moderate expense, a thorough collegiate training leading to the degree of Bachelor of Arts. The scholastic requirements for the degree are one hundred and twenty semester hours credit in addition to Physical Training, with a rank above the bottom quarter of the class in three fifths of the work.

In a limited number of departments, work is offered leading to the degrees of Master of Arts and Doctor of Philosophy.

The presence of a proportionately large graduate student body offers inducement to undergraduates for high standards of work.

Small classes and a relatively large faculty allow close acquaintance with heads of departments.

Undergraduates are encouraged to carry as full a schedule of courses as they are able and still maintain an average in the upper third of their classes. This permits those with sufficient ability to finish the course in three years.

The University's Summer School allows other ambitious students to obtain extra credits sufficient to earn the degree in three and one half years.

An endowment above the average, given for the specific purpose of keeping the expense of an education low, allows the tuition to be held at only \$150.00, including a tax of \$10.00 in support of student activities.



THE MAIN BUILDING

Officers of Administration and Instruction

WALLACE WALTER ATWOOD, Ph. D. (Chicago)
President

Professor of Physical and Regional Geography and
Director of the Graduate School of Geography

GRANVILLE STANLEY HALL, Ph. D., LL. D. (Harvard)
President Emeritus

HOMER PAYSON LITTLE, Ph. D. (Johns Hopkins)
Dean of the College and Professor of Geology

LOUIS N. WILSON, Litt. D. (Tufts)
Librarian

EDMUND CLARK SANFORD, Ph. D. Sc. D., LL. D. (Johns Hopkins)
Professor of Psychology and Education

WILLIAM HENRY BURNHAM, Ph. D. (Johns Hopkins)
Professor of Education and School Hygiene

BENJAMIN SHORES MERIGOLD, Ph. D. (Harvard)
Professor of Chemistry

FRANK BLAIR WILLIAMS, Ph. D. (Clark)
Professor of Mathematics

GEORGE HUBBARD BLAKESLEE, Ph. D., L. H. D. (Harvard)
Professor of History and International Relations

CHARLES BREWSTER RANDOLPH, Ph. D. (Harvard)
Professor of German and Director of the Summer School

PHILIP HUDSON CHURCHMAN, Ph. D. (Harvard)
Professor of Romance Languages

HAVEN DARLING BRACKETT, Ph. D. (Harvard)
Professor of the Greek and Latin Languages and Literatures

CHARLES A. KRAUS, Ph. D. (Mass. Inst. of Tech.)
Professor of Chemistry and Director of the Chemical Research
Laboratories

- LEROY ALLSTON AMES, A. M. (Harvard)**
 Professor of English Literature
- LORING HOLMES DODD, Ph. D. (Yale)**
 Professor of Rhetoric
- ROBERT HUTCHINS GODDARD, Ph. D. (Clark)**
 Professor of Physics
- GEORGE FREDERIC WHITE, Ph. D. (Johns Hopkins)**
 Professor of Organic Chemistry
- SAMUEL J. BRANDENBURG, Ph. D. (Wisconsin)**
 Professor of Economics and Sociology
- ALFRED LEWIS PINNEO DENNIS, Ph. D. (Columbia)**
 Professor of Modern History
- CARL MURCHISON, Ph. D. (Johns Hopkins)**
 Professor of Psychology
- ELLEN CHURCHILL SEMPLE, A. M., LL. D. (Vassar)**
 Professor of Anthropogeography
- OLIVER EDWIN BAKER, Ph. D. (Wisconsin)**
 Acting Professor of Agricultural Geography
- CAREY EYSTER MELVILLE, A. B. (Northwestern)**
 Associate Professor of Mathematics, Registrar, and Secretary of the
 Graduate Board
- CHARLES FRANKLIN BROOKS, Ph. D. (Harvard)**
 Associate Professor of Meteorology and Climatology
- KENNETH STILLMAN RICE, Sc. M. (Brown)**
 Assistant Professor of Biology
- CLARENCE FIELDEN JONES, Ph. D. (Chicago)**
 Assistant Professor of Economic and Commercial Geography
- WILLIAM LEONARD LANGER, Ph. D. (Harvard)**
 Assistant Professor of European History
- HARRY EDWARD MILLER, Ph. D. (Harvard)**
 Assistant Professor of Economics
- ASA ARTHUR SCHAEFFER, Ph. D. (Johns Hopkins)**
 Assistant Professor of Biology
- PERCY MARTIN ROOPE, A. M. (Clark)**
 Instructor in Physics
- EARL GODFREY MELLOR, A. B. (Clark)**
 Instructor in Romance Languages
- DOUGLAS CLAY RIDGLEY, M. S. (Chicago)**
 Special Lecturer in Geography
- ERNEST RAYMOND WHITMAN**
 Director of Physical Education
- FRANK GUY ARMITAGE, A. M. (Clark)**
 Extramural Representative
- FREDERICK HERBERT BAKER, M. D. (Harvard)**
 Medical Director
- J. EDWARD BOUVIER**
 Musical Director



UNION STATION

Location



WLARK University is situated in Worcester, Massachusetts, a city of about 195,000 inhabitants. The elevation above tidewater is 481 feet. The position of the city in the heart of Massachusetts, where three railroads join, makes it easy of access. It is an educational center, being the seat of Holy Cross College, Worcester Polytechnic Institute, Assumption College, Massachusetts State Normal School, and Worcester Academy, as well as Clark University. There is also in Worcester one of the fine art galleries of the country with an endowment of four million dollars; while the Worcester Music Festival, held annually for over sixty years, is one of the most renowned in the United States. There is a splendid Y. M. C. A. within easy walking distance of the College, whose buildings and equipment are larger than those of any city of similar size in the United States. Over one hundred churches give full opportunity for worship in accordance with individual preference. Much might be said concerning Worcester's more than six hundred manufacturing establishments—many

world famous — her excellent water supply and fire protection, her parks and stores. All combine to make Worcester a prosperous, pleasant city to live in.

Historical

Clark University owes its existence to the generosity of Jonas Gilman Clark, who donated funds for its establishment during his life and remembered it generously at his death. Students were first received in 1889. For the first thirteen years the University was exclusively a graduate school, and under the direction of President G. Stanley Hall, an able corps of instructors sent out from the University a small but steady stream of scholarly men who have given the institution a prominence disproportionate to its size in the fields of Psychology, Education, Mathematics, Physics, Biology, and Chemistry. In Mr. Clark's will provision was made for the establishment of a college, and the first students were received in October, 1902. The Graduate School and College occupied the same grounds and buildings, but had separate presidents and faculties. Carroll D. Wright was president of the College from its founding to his death in 1909, and Edmund C. Sanford from then until 1920. In June, 1920, Presidents Hall and Sanford both resigned, and Wallace W. Atwood was called to the presidency of the two institutions. In 1921-1922 plans for their unification were perfected, and they became the Graduate and Undergraduate Divisions of Clark University. The latter is still, however, ordinarily referred to as Clark College.

Endowment, Faculty, and Library

Clark University is a small institution with a total enrollment of approximately 290 students, but in contrast to many small institutions it has a relatively large endowment — nearly five million dollars, with an additional million in its plant. This money has not gone into showy buildings, but is invested in three things which are outstanding for an institution of its size — its faculty, its laboratories, and its library. These are the features about which a judgment of Clark should center.



INNER COURT, UNIVERSITY LIBRARY



INTERIOR OF THE LIBRARY

The faculty is relatively large and has a ratio to the entire student body of one to eight. The high degree of its professional training may be judged by an examination of the preceding pages. Every student has an opportunity to come into close association with the head of the department in which he studies. Money has been generously spent in the equipment of research laboratories and the undergraduate student receives much advantage from their presence. This is particularly true in Chemistry, Physics, Psychology, and Geography.

The Library deserves special mention. In this prerequisite for real university and college life, Clark is almost uniquely fortunate, for approximately three-quarters of a million dollars of the endowment fund was left for the exclusive use of the library. A permanent staff of seven besides student assistants is employed and the building is open for study from 8 a.m. to 10 p.m. each week day. Over one hundred thousand bound volumes and pamphlets are on the shelves and over five hundred journals are received. About four thousand books are added each year, and on Tuesday and Friday mornings each week all books recently added to the Library are placed on a table in the reference section, where they remain three days. Each member of the University has direct access to every book and journal,

and many courses are so planned as to lead students naturally into an habitual use of the library facilities. In order to increase its usefulness, the library has recently brought together its books on vocational guidance and published a classified list of them.

Buildings and Equipment

The campus consists of a plot of about seven acres, bounded by Main, Maywood, Woodland, and Downing Streets, a mile and a quarter southwest of the business center of Worcester. On the campus stand the Main Building, the Science Building, the Library, and residences of several members of the University Staff. The Main Building contains the offices of the College, the Assembly Hall, most of the lecture rooms, the laboratories of Biology, Geology, and Psychology, the Students' Reading Room and Club Room and the Gymnasium. In the Science Building are the laboratories of Physics and Chemistry.

An Athletic Field, an acre or more in extent, with tennis courts, outdoor basketball court, running track—one-sixth of a mile—and space for track athletics, lies adjacent to the campus on the southwest, separated from it by Maywood Street. The College Dining Hall stands at the corner of Woodland and Charlotte Streets, a short distance from the campus in the opposite direction. The President's House is near the Main Building upon the north.

The Gymnasium occupies something over half of the basement of the Main Building. The chief room, approximately 60 x 100 feet in size, is furnished with standard apparatus for gymnastic exercises and indoor sports. In its center is the basketball court. Next it are the locker rooms, with accommodations for 200 men, and beyond these the bath rooms. In another portion of the basement, but easily reached from the gymnasium proper, are two hand-ball courts.

Courses of Study

In the Graduate Division, courses leading to the degree of Master of Arts are offered in Chemistry and

Physics, while courses leading to the degree of Doctor of Philosophy are offered in Psychology, Education, Economics and Sociology, Geography, and History and International Relations. Graduate work is thus given in a few departments only, no attempt being made to rival the large universities in the range of work offered. The subject of Geography has recently been especially stressed by the establishment of a Graduate School of Geography, a specialized field of study not developed as far in this country as in Europe and one in which it is expected the University can perform a service unique in this section of the country. It is closely related to the other subjects in which the Doctor's degree is granted and the work in these departments is carefully coordinated.

In the Undergraduate School, on the other hand, every effort is made to offer the range of courses considered essential in a first class college.

The regular courses of instruction in the College are given in the following thirteen Departments:

A. Division of Science

I Mathematics, II Physics, III Chemistry, IV Biology,
V Geology

B. Division of Social Science and Philosophy

VI History and International Relations, VII Economics
and Sociology, VIII Psychology and Education,
IX Geography

C. Division of Languages and Literature

X English, XI German, XII Romance Languages,
XIII Ancient Languages

The student may elect to do his chief work in any one of these thirteen. So far his choice is unrestricted, but with his *major subject* chosen, most of the rest of his course follows under general rules. He is required to select a *minor* subject closely related to his *major*; he is required to take a certain amount of work in English and in Foreign Languages and he is required to select a minimum number of courses in the Division of Science



MAIN BUILDING FROM UNIVERSITY PARK

and in the Division of Social Science and Philosophy. The courses of the freshman year are largely required, but for the remainder of his course a student may select, without restriction, courses open to those of his stage of academic advancement, guided by a few general group requirements.

The Freshmen on entering may elect six courses; other students may do the same provided they average in the upper third of their classes for the preceding semester. All men who expect to complete the course in three years must carry six courses from entrance or do work in a summer school.

Admission

The normal requirements for admission to Clark College are good moral character and graduation with a creditable record from a high school of good standing. This is generally interpreted to mean not less than fifteen units of acceptable school work, two-thirds of which must have received the "certificate" grade of the school. *No applicants are accepted with conditions to be made up after admission.*

Candidates unable to meet in full the requirements indicated above may be admitted by passing the comprehensive examinations offered in June by the College Entrance Examination Board. Information concerning the Board may be obtained by pupil or teacher on addressing 431 West 117th St., New York City. Applications and fees must be forwarded to the Board at least four weeks before the intended examinations. In September, examinations are conducted by the College and are held in Worcester only. Special examinations will be given to establish credit in the following subjects: English, Mathematics, French, German, Spanish, Latin, Greek, History, Physics, Chemistry, Biology, Botany, and Zoology.

In accordance with its traditions of judging the individual, the College is always ready to consider the admission of men of maturity and demonstrated ability whose preparation has been for any reason irregular. Clark also believes less than many institutions in the

requirement of a rigidly prescribed program of designated courses for admission. For the details of admission to either the College or Graduate Division address the Registrar.

Graduation

To obtain the degree of Bachelor of Arts in regular course a student is required to complete in a satisfactory manner a total of 120 semester hours, exclusive of Physical Training; that is, the equivalent of five three-hour courses each semester of each year. No student's work is regarded as satisfactory and entitling him to graduation unless he ranks above the lowest quarter of his class in at least three-fifths of his work.

It has always been the policy of Clark College to emphasize the possibility of graduating in three years to a man who is willing to forego most of the so-called "college life" and devote himself assiduously to study. In order, however, to make sure that those who obtain the degree in three years are really superior students either in intelligence or in industry, it is required that they average in the upper third of all their classes. Credit bonuses given for high rank encourage the really ambitious student to make this effort. It is found, however, that the larger proportion of the students require or prefer four years before graduation. A combination of a normal program of five three-hour courses, together with work in a summer school, may make possible graduation in three and one-half years.

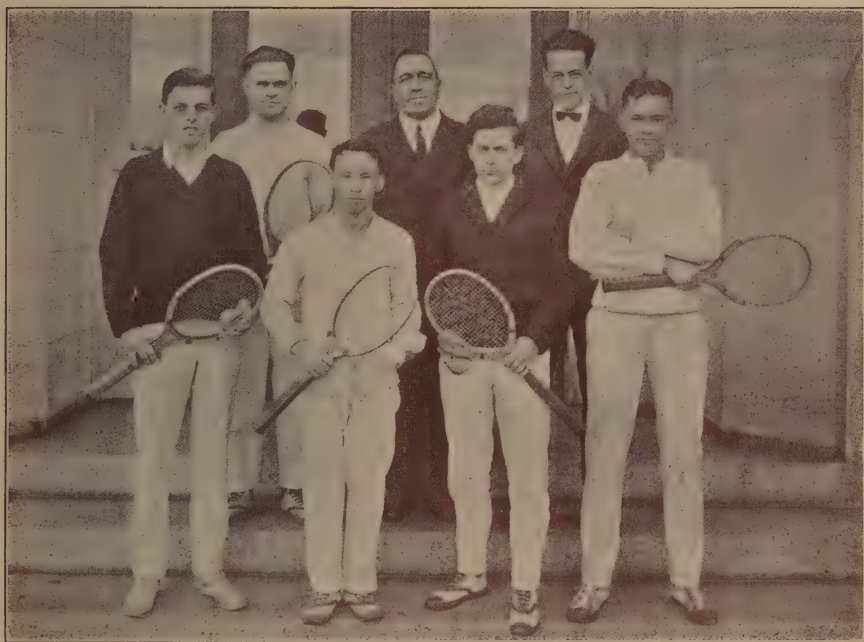
College Life Outside the Classroom

Clark stands uncompromisingly for the idea that the intellectual life of the institution as developed by reading, study, and in the classroom is the prime object of college and must at all cost be put first. It is just as thoroughly believed that by the proper planning of his time a student may find abundant opportunity for a reasonable amount of extra-curricular activity as well; therefore such recreations are encouraged. There are monthly Bohemians in the gymnasium, with two formal "Proms," one occurring between semesters and the



THE SCIENCE CLUB

other at Commencement time in June. College suppers are occasionally held in the College Dining Hall, at which faculty and students meet in a social way. The College sustains a notably successful Glee Club and Orchestra, trained by a professional Musical Director. Public concerts are given each year in Worcester and the neighboring towns. The Clark University Players, abbreviated to the CUPS, is a very successful dramatic association and is trained by a member of the English Department, who takes especial interest in this type of activity. Debating has for a long time been notably successful at Clark, having been for a number of years the only type of intercollegiate activity in which the students engaged. The students conduct the Clark Monthly, a magazine which is given over largely to the publication of their literary productions and serves also as a forum for the expression of college opinion. There are five local Greek letter fraternities,



TENNIS TEAM

besides several special fraternities and organizations. A science club has recently been receiving enthusiastic support, while a sociological fraternity gives opportunity for the discussion of present day problems.

Athletics

The importance of physical education has been recognized at Clark since its founding and gymnasium work has been required from students throughout their course. Since 1919 intercollegiate athletics have been permitted and particularly good success has been obtained in basketball. The College has also been fairly successful in competition in tennis. Rugby football is not played, but rapid advance has been made in soccer under competent coaching. The College also furnishes a baseball coach, and if the new athletic field which is being considered becomes available, much advance may be looked for in that sport.

Rules and Regulations

There are comparatively few rules formulated for the conduct of the student body, the chief requisite being that a man shall conduct himself in a gentlemanly manner. Class attendance, however, is enforced through a cut system which penalizes a student for what is considered more than a reasonable number of absences, namely, a total of fifteen a semester in all courses, or five in one course, with the provision that an absence because of authorized extra-curricular activities shall be counted only as a half cut. No student is permitted to take part in extra-curricular activities who does not obtain a reasonable scholastic standing. All undergraduates whose homes are outside of Worcester must eat at the Dining Hall, where board is furnished under the supervision of a competently trained dietitian. Attendance at weekly assembly is required with the exception of certain allowed cuts.

Expenses

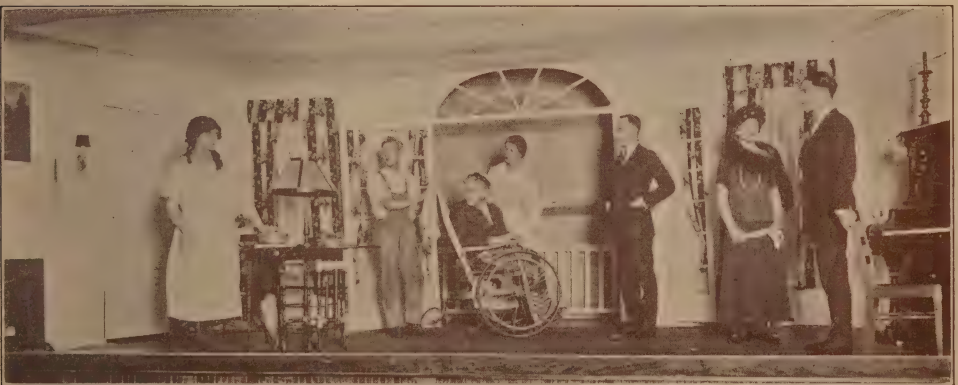
A matriculation fee of \$5.00 is required on entrance, but not thereafter. Tuition is \$75.00 a semester, payable in advance. This includes a \$10.00 student tax for the support of various student activities, chiefly athletics and debating. Owing to the express desire of the founder that his generous endowment should be used to make a college education available to deserving young men at reasonable cost, the expense of tuition has been kept at about one-half that at many New England institutions offering similar advantages. The students have imposed upon themselves in addition a deposit of \$4.50. Any balance left from this is returned after charges have been checked off for special organizations with which the student desires to affiliate or further student activities which he wishes to support. Laboratory fees average \$2.50 a semester for science courses. Board at the Dining Hall is usually about \$7.00 per week. Lodging can be secured within convenient distance at a cost as low as \$3.00 per week for a furnished room. The cost of books varies with the courses taken



ORCHESTRA



GLEE CLUB



DRAMATIC CLUB

and no definite figure can be given. Twenty-five dollars a year, however, is probably a generous estimate.

Scholarships, Student Aid and Self-Help

No attempt will be made to describe the rather numerous fellowships and scholarships open to graduate students. Information concerning them may be obtained from the Registrar. The College has twenty scholarships available at present. Five are major scholarships, yielding tuition* for one year, and twenty are minor scholarships, yielding tuition* for one semester, awarded on the combined basis of pecuniary need, character, and scholarship. Of these, five are granted on entrance to high standing Freshmen of good character and five more to Freshmen at the beginning of the second semester. If the record of those who received them at entrance continues good it is possible for them to receive the award of the second semester as well, thus making the equivalent of a major scholarship. The remaining ten scholarships are awarded at the beginning of the academic year to students in regular standing who have completed at least one-fourth of the work required for the Bachelor's degree. There are, in addition, special scholarships which assist deserving students.

The Clark College Loan Fund and the Estabrook Fund are special funds from which grants are made by the Collegiate Dean and a sufficient amount is available to insure the continuance in College of worthy students. In order that the student may feel that he is taking part in a legitimate business transaction, as well as to protect the funds, endorsed notes are required.

Students desiring to work their way through Clark are usually able to find employment for as much time as they can rightly spare from their studies. In view, however, of the time required for the regular work of the College, only an exceptional student should expect to earn more than a limited part of his expenses, and it is felt that at least \$300.00 should be at the disposal of any man beginning a college course. Of course fairly numerous exceptions to this rule are always found.

*Does not include student tax.



FIAT LUX

Oh Clark! Thy sons have gathered
To thee from east and west
To pledge with deep devotion
The college they love best.
They love thy halls and campus,
Each comrade of their heart,
The mem'ries, aims, traditions
That make thee what thou art.

Hail Clark! We who revere thee
Salute thee with a cheer!
While we shall live we'll praise thee
Oh college without peer!
Only with life shall perish
Thy name and mem'ry bright;
Thy sons shall ever cherish
The Scarlet and the White.

God speed our Alma Mater
And may she ever be
The leader of the leaders
The freest of the free!
Her sons shall still press onward,
The foremost in the fight,
Till everywhere her watchword
Shall ring, "Let there be light."

E. L. CLARK, '09

For Further Information
Address

*The Registrar, Clark University
Worcester, Massachusetts*

13E

Tuesday and Thursday Evening Lectures Clark University Summer School

1924

Thursday, July 10. PRESIDENT WALLACE W. ATWOOD
Travel and Exploration in Alaska (Illustrated)

Tuesday, July 15. RABBI SIDNEY TEDESCHKE, of New Haven
The Jews of the Middle Ages

Thursday, July 17. PRESIDENT WALLACE W. ATWOOD
The Call of the Desert (Illustrated)

Tuesday, July 22. PROFESSOR LORING H. DODD
Augustus Saint Gaudens (Illustrated)

Thursday, July 24. PRESIDENT WALLACE W. ATWOOD
Porto Rico: A Geographic Study of a Tropical Island
(Illustrated)

Tuesday, July 29. PROFESSOR CARL MURCHISON
Criminal Intelligence

Thursday, July 31. PROFESSOR RODERICK PEATTIE
The Saint Lawrence Valley: A Provincial Study

Tuesday, August 5. PROFESSOR WILLIAM L. LANGER
The Problem of Alignment Among European Powers

Thursday, August 7. PROFESSOR DOUGLAS C. RIDGLEY
A Trip through New England

Tuesday, August 12. PROFESSOR SAMUEL J. BRANDENBURG
Malthusianism in New England: A Discussion of the
Population and Economic Life of the Commonwealth

Course Tickets: All the Lectures, \$5; Tuesday Evenings or
Thursday Evenings, \$3. **Single Lecture:** 75 cents

Lectures at eight o'clock

Clark University Bulletin

NUMBER 30

APRIL, 1924

ANNOUNCEMENT

of

The Graduate Division

for

1924-25

Geography

Economics and Sociology

History and International Relations

Psychology

Education and School Hygiene

Biology

Chemistry

Physics

The Bulletin is published in January, February, March, April, May, October,
November, and December

Entered as second-class matter December 29, 1920, at the Post Office at Worcester, Mass., under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in section 1103, Act of Oct. 3, 1917, authorized January 24, 1921.

General Information

The University accepts graduate students for courses of study leading to the degree of Master of Arts in each of the departments named on the cover of this announcement.

The degree of Doctor of Philosophy is granted in the following departments only: Economics and Sociology, Education and School Hygiene, Geography, History and International Relations and Psychology.

Admission to the Graduate Division is open (a) to graduates of approved colleges and (b) to others on such terms as the Graduate Board may impose. A student admitted under (a) whose undergraduate course has included a good preparation for graduate study in a given department may reasonably expect to proceed to a graduate degree in the minimum time. Others should plan to devote a longer time to study for the degree. The minimum period of study after the completion of an undergraduate course required for the degree of Master of Arts is one year, for the degree of Doctor of Philosophy, three years.

The minimum period of full time study in residence required for a graduate degree is one academic year. Candidates for the degree of Master of Arts may complete this residence requirement in four sessions of the Summer School. The residence requirement may also be met by part time study extending over a longer period of time, subject to the consent of the Graduate Board in each case.

The tuition in the University is \$150.00 yearly. Scholarships yielding tuition, or tuition and a cash stipend of \$100.00 are available to students of better than average ability in all of the departments named. Fellowships with cash stipends varying from \$100.00 to \$300.00 in addition to tuition are available to candidates for the degree of Doctor of Philosophy. There are also a limited number of *University Fellowships* yielding room, board and tuition.

In addition to the courses listed in the following pages, each department offers a full list of undergraduate courses.

For further information in regard to graduate study address the department concerned, or C. E. Melville, Secretary of the Graduate Board, Clark University, Worcester, Mass.

Geography

Work in Geography is carried on by the Graduate School of Geography which is organized with a faculty of specialists in the various branches of Geography. The School occupies a well equipped building including lecture rooms, offices and work rooms, and directly connected with the University Library.

Degrees in Geography are granted by the University on the same terms as apply to degrees in other departments.

STAFF

WALLACE W. ATWOOD, PH.D., Professor of Physical and Regional Geography and Director of the Graduate School of Geography.

ELLEN C. SEMPLE, LL.D., Professor of Anthropogeography.

OLIVER E. BAKER, PH.D., Professor of Agricultural Geography and Land Utilization.

CHARLES F. BROOKS, PH.D., Associate Professor of Meteorology and Climatology.

DOUGLAS C. RIDGLEY, M.S., Associate Professor of Geography in Education and Director of Home Study.

CLARENCE F. JONES, PH.D., Assistant Professor of Economic Geography.

HELEN M. STRONG, Lecturer in Industrial and Commercial Geography.

CURTIS F. MARBUT, PH.D., Special Lecturer on Soils.

HOMER L. SHANTZ, PH.D., Special Lecturer on Plant Geography.

W. ELMER EKBLAW, M.A., Managing Editor, Journal of Economic Geography.

GUY H. BURNHAM, M. A., Cartographer.

Other members of the University Staff Offering Closely Related Work

GEORGE H. BLAKESLEE, PH.D., Professor of History and International Relations.

ALFRED L. P. DENNIS, PH.D., Professor of Modern History.

WILLIAM L. LANGER, PH.D., Assistant Professor of European History.

J. B. HEDGES, PH.D., Assistant Professor of American History.

HOMER P. LITTLE, PH.D., Professor of Geology.

SAMUEL J. BRANDENBURG, PH.D., Professor of Economics and Sociology.

HARRY E. MILLER, PH.D., Assistant Professor of Economics.
 V. O. WATTS, M.A., Instructor in Economics and Sociology.
 WILLIAM H. BURNHAM, PH.D., Professor of Education and
 School Hygiene.

OUTLINE OF COURSES IN GEOGRAPHY

(Note change in numbering from February, 1924, catalog)

COURSES LEADING TO THE DEGREE OF MASTER OF ARTS

- | <i>First Semester Courses</i> | <i>Second Semester Courses</i> |
|---|--|
| 28a. FIELD GEOGRAPHY, Sept.-Nov., Dr. Jones; 3 hrs. | 29b. CARTOGRAPHY AND GRAPHICS, M. 5, Dr. Baker, Dr. Atwood and Mr. Burnham; 1 hr. |
| 23a. SOILS AND PLANT GEOGRAPHY, Nov.-Jan., Dr. Marbut, Dr. Shantz; 3 hrs. | ECONOMIC GEOLOGY, M. W. F. 11, Dr. Little; 3 hrs.
(Dept. of Geology). |
| 21a. REGIONAL PHYSIOGRAPHY, M. W. F., 9, Dr. Atwood; 3 hrs. | 22b. ADV. CLIMATOLOGY AND CLIMATES OF THE WORLD, Tu. 11, Th. S. 12, Dr. Brooks; 3 hrs. |
| 22a. ADV. CLIMATOLOGY AND CLIMATES OF THE WORLD, T. T. S., 9, Dr. Brooks; 3 hrs. | 26b. ADV. INDUSTRIAL GEOGRAPHY, T. T. S. 10; 3 hrs. |
| 24a. ADVANCED ECONOMIC GEOGRAPHY, T. T. S. 10, Dr. Jones, 3 hrs.
(Omitted 1924-25).
LAND ECONOMICS, M. W. F. 11, Dr. Brandenburg, 3 hrs.
(Dept. of Economics).
HISTORICAL GEOGRAPHY OF THE U. S., Dr. Hedges, M. W. F. 11, 3 hrs.
(Dept. of Hist. & Int'l Rel.). | 25b. LAND UTILIZATION, M. W. F. 10, Dr. Baker; 3 hrs. |
| 27a. GENERAL PRINCIPLES OF ANTHROPOGEOGRAPHY, M. W. F. 10, Dr. Semple; 3 hrs.
(Omitted 1924-25). | 20b. GEOGRAPHY IN EDUCATION, M. W. F. 4, Mr. Ridgley; 3 hrs. |
| 200. GEOGRAPHY FOR TEACHERS, S. 9, Mr. Ridgley or——— 1 hr. | 200. GEOGRAPHY FOR TEACHERS, S. 9, Mr. Ridgley or——— 1 hr. |
| 30a. PRO-SEMINAR, W. 4-6, Dr. Semple, Dr. Jones; 2 hrs. | 30b. PRO-SEMINAR, Th. 4-6, Dr. Baker and others; 2 hrs. |

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

First Semester Courses

Second Semester Courses

- | | |
|---|--|
| 311. SEMINAR IN PHYSIOGRAPHY, Dr. Atwood; 2 hrs. | 311. SEMINAR IN PHYSIOGRAPHY, Dr. Atwood; 2 hrs. |
| 312a. SEMINAR IN CLIMATES, SOILS AND NATIVE VEGETATION, F. 4-6, Dr. Brooks, Dr. Marbut, Dr. Shantz; 2 hrs. | 315b. AGRICULTURAL GEOGRAPHY OF N. AM., M. W. F. 9, Dr. Baker; 3 hrs. |
| 324a. ECONOMIC GEOGRAPHY OF S. AM., T. T. S. 10, Dr. Jones; 2 hrs. | 316b. INDUSTRIAL GEOGRAPHY OF N. AM., T. T. S. 9; 3 hrs. |
| 337a. GEOGRAPHY OF THE ANCIENT MEDITERRANEAN, M. W. F. 10, Dr. Semple; 3 hrs. | 330b. GEOGRAPHY OF EUROPE, M. W. F. 12; 3 hrs. |
| 347a. GEOGRAPHY OF EASTERN ASIA, Tu. 3-5, Dr. Semple; 2 hrs. | 374b. GEOGRAPHY OF WORLD COMMERCE, T. T. S. 11; 3 hrs. |
| 300. SEMINAR IN GEOGRAPHY, alt. Th. ev. 7.30, Officers of the Staff; 1 hr. | 300. SEMINAR IN GEOGRAPHY, alt. Tu. ev. 7.30, Officers of the Staff; 1 hr. |
| 381. ADVANCED FIELD GEOGRAPHY, (Summer 1925 Dr. Jones, 1926 Dr. Baker). | |
| 382. FIELD GEOGRAPHY, (Individual work). Available at any time. | |
| 383. SOIL SURVEY WORK, (1 mo. in summer); 4 hrs. | |
| 391-399. RESEARCH IN THE SPECIAL PHASES OF GEOGRAPHY. With appropriate specialists; available for any period at any time of year. | |

COURSES IN GEOGRAPHY

COURSES LEADING TO THE DEGREE OF MASTER OF ARTS

21a. REGIONAL PHYSIOGRAPHY. A critical review of the principles of Physiography and their application in the analysis of the physiographic features and physiographic history of selected areas. In 1924-25 special emphasis will be given to North America.

Three hours, first semester. M. W. F., 9.

PROFESSOR ATWOOD AND ASSISTANT

New course. Open to upper classmen who have passed General Geology.

22a and b. ADVANCED CLIMATOLOGY AND CLIMATES OF THE WORLD. The principles of Climatology, followed by a comparison of the major types of climatic environment found in different parts of the world; *e. g.*, continental, marine and mountain climates. Acclimatization. Changes of climate. In 1924-25 special emphasis will be given to North America.

Three hours, each semester. T. T. S., 9, first semester; Tu., 11, Th. S., 12, second semester.

ASSOCIATE PROFESSOR BROOKS

23a. SOILS AND PLANT GEOGRAPHY. Types of soils and their mode of formation. Soil regions in relation to climate and vegetation. Native vegetation in relation to soils and climate. Plant regions of North America and the rest of the world.

Meetings at hours to be arranged. Nov.-Jan.

Three hours credit.

New course.

DR. MARBUT AND DR. SHANTZ

24a. ADVANCED ECONOMIC GEOGRAPHY.

Omitted, 1924-25.

The second semester of the course Economic Geology by Professor Little is recommended in this field.

25b. ADVANCED INDUSTRIAL GEOGRAPHY.

Three hours, second semester. Tu. Th. S., 10.

New course, for which plans are being made.

26b. (34b in 1924 catalog) LAND UTILIZATION. The physical and economic conditions which determine the utilization of land for crops, pasture, and forest; the geographic distribution of such lands; the probable need of these classes of land as population increases, and the possibilities of meeting this need by irrigation, drainage, clearing, more intensive cultivation, and other means; a discussion of a national land policy. The course on Land Economics by Professor Brandenburg of the Department of Economics is recommended as a preliminary to this course.

Three hours, second semester. M. W. F., 10.

PROFESSOR BAKER

27a. (32a in 1924 catalog) GENERAL PRINCIPLES OF ANTHROPOGEOGRAPHY.

Omitted, 1924-25.

In this field, Historical Geography of the United States by Assistant Professor Hedges of the Department of History and International Relations is recommended.

28a. FIELD GEOGRAPHY. The course is based chiefly on field work which affords training in detailed mapping, sketching, field note taking, and an investigation of local literature. The course also involves the recognition of geographic problems, their analysis and interpretation.

Three hours credit. Selected periods, Sept.-Nov.

New course.

ASSISTANT PROFESSOR JONES

29b. CARTOGRAPHY AND GRAPHICS. Principles and practice of map-making, construction of diagrams, and relief drawings.

One hour, second semester. M., 5.

PROFESSOR BAKER, PROFESSOR ATWOOD AND MR. BURNHAM
New course.

20b. (261b in 1924 catalog). GEOGRAPHY IN EDUCATION. A survey of Geography in the present-day American school system, including elementary school, high school, teacher-training institutions, colleges, and universities. Designed to meet the needs of those expecting to teach Geography.

Three hours, second semester. M. W. F., 4.

ASSOCIATE PROFESSOR RIDGLEY OR————

200. THE TEACHING OF GEOGRAPHY. The scope and purpose of geography in the elementary school and high school. A study of methods appropriate to the teaching of geography, including the problem method and project method. Standard equipment for geography teaching. Library reading closely related to the classroom work of members of the class.

One hour, through the year. S., 9.

New course.

ASSOCIATE PROFESSOR RIDGLEY OR————

30. PRO-SEMINAR. Themes for investigation and discussion will be assigned each week for the first two months. Later, themes will be assigned to individuals, with a special view to training in research. Thesis problems will later be presented and discussed.

Two hours, first semester, W., 4-6; second semester, Th., 4-6.

PROFESSOR SEMPLE AND ASSISTANT PROFESSOR JONES First Semester.

PROFESSOR BAKER AND OTHERS, Second Semester.

COURSES LEADING TO THE DEGREE OF DOCTOR OF PHILOSOPHY

311. SEMINAR IN PHYSIOGRAPHY. A critical review of the source material on Physiography and of leading contributions made by those who have developed this phase of geographic investigation.

Two hours, through the year. M., 4-6. PROFESSOR ATWOOD

312a. SEMINAR IN CLIMATES, SOILS AND NATIVE VEGETATION.

Two hours, first semester. F., 4-6.

ASSOCIATE PROFESSOR BROOKS, DR. MARBUT, AND DR. SHANTZ

315b. AGRICULTURAL GEOGRAPHY OF NORTH AMERICA. A course describing the agriculture of North America and the influence of physical and economic conditions in directing its development.

Three hours, second semester. M. W. F., 9.

PROFESSOR BAKER

316b. INDUSTRIAL GEOGRAPHY OF NORTH AMERICA.

Three hours, second semester. Tu. Th. S., 9.

DR. STRONG

324a. (22b in 1924 catalog) ECONOMIC GEOGRAPHY OF SOUTH AMERICA. A study of the economic activities of the people of South America in relation to the environmental complex of the various geographic regions, trade regions and commercial opportunities.

Three hours, first semester. Tu. Th. S., 10.

ASSISTANT PROFESSOR JONES

330b. GEOGRAPHY OF EUROPE.

Three hours, second semester. M. W. F., 12 noon.

New course for which arrangements are being made.

337a. (33a in 1924 catalog) GEOGRAPHY OF THE MEDITERRANEAN REGION, ESPECIALLY IN RELATION TO ANCIENT HISTORY.

A geographic interpretation of ancient history in Mediterranean lands under the peculiar influences of the Mediterranean climate, the Mediterranean Sea, its relation to the Atlantic Ocean, the Red and Black seas; the effect of various geographic conditions upon ancient agriculture, industry, navigation, trade, social and political life.

Three hours, first semester. M. W. F., 10.

PROFESSOR SEMPLE

347a. (36a in 1924 catalog) THE GEOGRAPHY OF EASTERN ASIA, with special reference to economic, cultural and territorial development of the Japanese Empire. A lecture course with generous reading assignments.

Two hours, first semester. Tu., 3-5. PROFESSOR SEMPLE

374b. GEOGRAPHY OF WORLD COMMERCE.

Three hours, second semester. Tu. Th. S., 11.

DR. STRONG

300. SEMINAR IN GEOGRAPHY. Round-table discussions will be conducted for the graduate students of geography, and recent publications will be reviewed. Students will also present portions of their thesis work from time to time.

Alternate Thur. evenings, 7.30, first semester; Tues. evenings, second semester.

THE GEOGRAPHY STAFF

381. (39 in 1924 catalog). ADVANCED FIELD GEOGRAPHY. Maritime Provinces of Canada and the Lower St. Lawrence Valley.

Four weeks, August, 1925. ASSISTANT PROFESSOR JONES

382. FIELD GEOGRAPHY (INDIVIDUAL WORK). For students in the field collecting information for their theses.

383. SOIL SURVEY WORK.

One month, in summer.

PROFESSOR BAKER

390. (310 in 1924 catalog). RESEARCH IN REGIONAL GEOGRAPHY.

PROFESSOR ATWOOD, PROFESSOR JONES, OR DR. SHANTZ

391. (311 in 1924 catalog). RESEARCH IN PHYSIOGRAPHY.

PROFESSOR ATWOOD

392. (312 in 1924 catalog). RESEARCH IN CLIMATOLOGY.

ASSOCIATE PROFESSOR BROOKS

393. RESEARCH IN SOILS OR PLANT GEOGRAPHY.

DR. MARBUT OR DR. SHANTZ

394. (314 in 1924 catalog). RESEARCH IN ECONOMIC GEOGRAPHY.

ASSISTANT PROFESSOR JONES

395. (315b in 1924 catalog). RESEARCH IN LAND UTILIZATION.

PROFESSOR BAKER

397. RESEARCH IN ANTHROPOGEOGRAPHY.

PROFESSOR SEMPLE

399. RESEARCH IN GEOGRAPHY IN EDUCATION.

ASSOCIATE PROFESSOR RIDGLEY AND DR. BURNHAM of the Department of Education.

Economics and Sociology

SAMUEL J. BRANDENBURG, PH.D., Professor of Economics and Sociology.

HARRY EDWARD MILLER, PH.D., Assistant Professor of Economics.

V. O. WATTS, M.A., Instructor in Economics and Sociology.

Since the publication of the 1924 catalog the department has been strengthened by the addition of Mr. V. O. Watts, M.A., who will give special attention to graduate and undergraduate courses in Sociology.

A sufficient range of courses is offered in cycles of two or three years so that graduate students may be adequately prepared for the doctorate.

The attention of students in Economics and Sociology is directed to closely allied courses offered in the Departments of Geography, History and International Relations, Geology and Psychology.

COURSES IN ECONOMICS

23. (Numbered 13 in 1923-24). MONEY, BANKING AND THE BUSINESS CYCLE. The principles of money and banking, with special reference to their functions in the present economic organization of society. History of money and banking in the United States and Western Europe. The Federal Reserve system will be considered in some detail. Foreign exchange, organized speculation in its relation to the money market, and the business cycle are included in the subject matter of the course.

Three hours, through the year. M. W. F., 11.

ASSISTANT PROFESSOR MILLER

25a. PUBLIC FINANCE. A study of the principles of public revenues, expenditures and debts, with particular reference to American conditions.

Three hours, first semester.

MR. WATTS

27b. INTERNATIONAL TRADE AND INTERNATIONAL FINANCE. Theory of international trade and its applications to questions of commercial policy; arguments for and against protective duties; the influence of the tariff on certain important American in-

dustries; present tariff policy critically examined, with special attention to the tariff policy of the United States.

Three hours, second semester.

MR. WATTS

210b. ECONOMIC AND SOCIAL REFORM. The historical and economic background of reform movements; socialism as a criticism of the system of the classical economists and of existing institutions, as a theory of social progress, and as a program of social reform; other plans and projects for economic reconstruction.

Three hours, second semester. M. W. F., 11.

PROFESSOR BRANDENBURG

31. (Numbered 21 in 1923-24). INTERNATIONAL ECONOMIC POLICIES. National tariff policies or other commercial restrictions with the international problems arising therefrom; national, private or public establishments for the promotion of foreign trade; banking and credit facilities as factors in foreign trade; commercial treaties; navigation laws and general maritime policies of important commercial nations.

Two or three hours, through the year.

PROFESSOR BRANDENBURG

32a. LAND ECONOMICS. Land Economics is a study of those social and economic relationships arising out of man's dependence on land as a factor in the production of economic goods. The course studies the economic concept of land in contrast with the geographical and legal concepts; property in land and forms of land tenure; the economic characteristics of land as contrasted with the other factors of production; costs involved in adapting land to the needs of men; rent and income from land, together with an intensive study of the theory of rent as applied to various types of land; rural and urban tenancy and ownership; land taxation, land credit, land values, etc. This course is planned particularly for graduate students and is regarded as a prerequisite to Geography 25b, Land Utilization.

Three hours, first semester. M. W. F., 11.

PROFESSOR BRANDENBURG

39. (Numbered 29b in 1923-24, and offered as a second semester course). VALUE AND DISTRIBUTION. An advanced course in economic theory, involving a critical reading of Ricardo, J. S. Mill, and representative modern economists. Intended to trace the progress of economic thought since the early part of the nineteenth century and to train the student in critical consideration

of economic principles. The course is conducted mainly by discussion, in which the students are expected to take an active part.

Three hours, through the year.

ASSISTANT PROFESSOR MILLER

311. SEMINAR IN ECONOMICS. Round-table meetings are held fortnightly in the evening for presentation of the results of investigation by members of the Seminar. As occasion offers, other persons are invited to address the Seminar on matters of general interest.

All graduate students in the department are expected to attend.

THE STAFF OF THE DEPARTMENT

COURSES IN SOCIOLOGY

22. SOCIAL PATHOLOGY. The nature, extent and causes of poverty, defectiveness and crime. A critical study of the methods advocated or used for the prevention or amelioration of these conditions. In the second semester a more intensive study of topics taken up during the first semester along with other selected topics will be undertaken. The object of this part of the course is primarily to give a knowledge of the sources of materials and practice in testing and applying the principles derived in the earlier courses in Sociology.

Three hours, through the year.

MR. WATTS

31. SOCIOLOGY SEMINAR. A first-hand study of private and public institutions of Worcester City and County devoted to welfare, charitable, or correctional work; studies of local population growth and racial composition; social relations between the urban community and adjacent rural regions. [The exact content of this course is determined from year to year by the *major* interests, preparation, and experience of the students registering.]

See also Economics 210b, ECONOMIC AND SOCIAL REFORM.

History and International Relations

GEORGE H. BLAKESLEE, PH.D., L.H.D., Professor of History and International Relations.

ALFRED L. P. DENNIS, PH.D., Professor of Modern History.

WILLIAM L. LANGER, PH.D., Assistant Professor of European History.

JAMES B. HEDGES, PH.D., Assistant Professor of American History.

With the opening of the first semester of 1924-25, Professor Blakeslee again takes up his work in the department after a leave of absence for half year, and Mr. J. B. Hedges, Ph.D., enters the department as Assistant Professor of American History. Professor Dennis will be absent on leave for the first semester, studying special problems in Europe.

COURSES IN HISTORY AND INTERNATIONAL RELATIONS

21b. SELECTED TOPICS IN MODERN DIPLOMATIC HISTORY. Particularly since 1870, relating mainly to European questions. *Two hours*, second semester. M. W., 4.

PROFESSOR DENNIS

23. CENTRAL EUROPE IN THE 19TH CENTURY. Introductory lectures followed by a detailed study of Germany and Austria-Hungary, stressing economic development and expansion, and the questions of nationality in Austria-Hungary and the Near East. Special attention to the present situation and problems of Central Europe, particularly of the new states.

Three hours, through the year. Tu. Th. S., 10.

ASSISTANT PROFESSOR LANGER

27. LATIN AMERICA. A brief survey of Latin American history and civilization is followed by a study of economic and industrial conditions; political and international issues; and, especially, the relation, in trade and diplomacy, with the United States. Present problems are stressed, such as the Mexican and Caribbean situation, and the economic and financial penetration of the United States.

Three hours, through the year. M. W. F., 10.

PROFESSOR BLAKESLEE

211a. THE HISTORICAL GEOGRAPHY OF THE UNITED STATES. The physiographic basis of American History, with an analysis of the influence of geographic factors upon the social, economic and political development of the United States from colonial times to the present.

Three hours, first semester. ASSISTANT PROFESSOR HEDGES

32. RECENT INTERNATIONAL RELATIONS OF THE UNITED STATES. A lecture and research course, from the Civil War to the present; emphasis upon the period since the World War. A critical comparison of the foreign policies towards Europe, the Americas and the Far East. Special attention to policies of Isolation vs. Co-operation, Open Door, Monroe Doctrine; and relations with Great Britain, Germany and France.

Two hours, through the year. M. W., 3.

PROFESSOR BLAKESLEE

321b. SELECTED TOPICS IN RECENT BRITISH HISTORY. A research course based upon a study of source material. The fields of investigation will change from year to year.

Two hours, second semester. M. W., 5.

PROFESSOR DENNIS

332. HISTORICAL BIBLIOGRAPHY AND CRITICISM. An introduction to the problems of historical work, giving an acquaintance with the methods of investigation and the criticism of source material. The larger part of the course will be devoted to the study of various types of historical writing from the earliest times to the present.

Two hours, through the year. Th., 4-6.

ASSISTANT PROFESSOR LANGER

341. AMERICAN HISTORY SINCE 1865. A synthesis of the social, economic, political and constitutional development of the United States, with emphasis upon the economic expansion of the period.

Two hours, through the year. M. W., 4, first semester; T., 4-6, second semester.

ASSISTANT PROFESSOR HEDGES

36. SEMINAR IN INTERNATIONAL RELATIONS. Weekly Seminar of all students *majoring* in the Department. Reports, book reviews, and discussions.

T., 7.45-10. p. m.

PROFESSORS BLAKESLEE, DENNIS, LANGER AND HEDGES

Psychology

EDMUND C. SANFORD, PH.D., Sc.D., LL.D., Professor of Psychology and Education.

CARL MURCHISON, PH.D., Professor of Psychology.

WOLFGANG KOEHLER, PH.D., Visiting Professor from the University of Berlin.

JOHN P. NAFE, PH.D., Assistant Professor of Psychology.

Dr. Koehler is head of the Department of Psychology in the University of Berlin, and is distinguished for his work in comparative Psychology and for his exposition of the "Gestalt Psychology." He comes in February, and will remain one year.

Dr. Nafe is at present instructing in the Department of Psychology in Cornell University, and will assume his duties at Clark at the beginning of the academic year.

The G. Stanley Hall Library of some thousands of volumes has been installed in the laboratory, while the G. Stanley Hall Fund makes possible extensive research in the general field of Genetic Psychology.

COURSES IN PSYCHOLOGY

201a. EDUCATIONAL PSYCHOLOGY. The aim of this course is a consideration of the learning process in its various aspects and in its dependence upon men's original tendencies and capacities.

Three hours, first semester. Tu. Th. S., 9.

PROFESSOR SANFORD

202. SOCIAL PSYCHOLOGY. In the beginning of this course the history of Social Psychology will be analyzed somewhat in detail. This will be followed by consideration of the characteristics of human nature as they are expressed in social customs and in the variety of individual differences. This will be followed by consideration of the inevitable effects of social customs and individual differences upon the various social institutions. The psychology of society will be emphasized quite as much, if not more than the social psychology of the individual.

Three hours, through the year. M. W. F., 10.

PROFESSOR MURCHISON

203. ADVANCED EXPERIMENTAL PSYCHOLOGY. In this course the student will be required to investigate two or more minor problems in the general field of experimental Psychology. The student in this course will have an opportunity to demonstrate his laboratory ingenuity and technique.

ASSISTANT PROFESSOR NAFE

302a. PSYCHOLOGICAL THEORIES. The subject matter of this course will consist of a consideration of the outstanding theories in the history of Psychology. There will be special emphasis on the development of the various English and American schools of Psychology.

PROFESSOR MURCHISON

305. RESEARCH. All students *majoring* in the Department of Psychology for advanced degrees will be expected to undertake a suitable research problem under the direction of Professors Murchison, Sanford, Koehler, or Nafe.

307b. SEMINAR ON THE GESTALT PSYCHOLOGY. The Gestalt theory will be considered both in its historical development and in its systematic aspects. The possibility of extending the Gestalt theory to all the fields of Psychology will be seriously considered.

DR. KOEHLER

308b. CRIMINAL PSYCHOLOGY. This course investigates data bearing on the intelligence of the criminal, types of criminals, recidivism, effects of length of incarceration, racial and geographical concomitants, seasonal distribution; religious, literate, age, domestic and industrial factors in crime; and attempts to describe criminal behavior in the light of norms already familiar.

PROFESSOR MURCHISON

310a. LECTURE COURSE ON EXCEPTIONAL CHILDREN. This course will consider the problem of the exceptional child, both in the light of what the mental tests reveal, and also in the light of educational and social demands.

A semester course open to graduate students and teachers.

One hour, first semester. S., 11.

PROFESSOR SANFORD

311a. SEMINAR ON CURRENT PSYCHOLOGICAL PROBLEMS. This is a semester course open to advanced graduate students meeting once a week for a two-hour period, time to be arranged.

PROFESSOR SANFORD

312. SYSTEMATIC PSYCHOLOGY. This is a two-year course and is entered only after consultation with the instructor. It consists of a systematic study of modern experimental Psychology.

ASSISTANT PROFESSOR NAFE

304. JOURNAL CLUB. To be devoted to the study of selected topics in current Psychological literature. All students *majoring* in Psychology for advanced degrees are members of the Journal Club. At the beginning of the year each student will be assigned his Journal, and he is expected to be familiar with the various articles published in that Journal during the year.

W., 3.

305b. COMPARATIVE PSYCHOLOGY. This course will consider the historical development of comparative Psychology, and will show the close relations of the various types of behavior. The actual methods to be pursued in the course will be determined by Dr. Koehler himself after his arrival at Clark, and will be announced to graduate students at that time.

DR. KOEHLER

306b. MENTAL AND NERVOUS DISEASES. Through the courtesy of the Superintendent and Staff of the Worcester State Hospital for the Insane, the Department of Psychology is enabled to offer a course of sixteen lectures on Psychiatry and related topics. Some of the lectures will be given at the University and some at the hospital.

One hour a week, second semester.

DR. WILLIAM A. BRYAN, Superintendent of the Worcester State Hospital for the Insane, assisted by other members of his staff.

Education and School Hygiene

WILLIAM H. BURNHAM, PH.D., Professor of Education and School Hygiene.

EDMUND C. SANFORD, PH.D., Sc.D., LL.D., Professor of Psychology and Education.

The work of this department is in the closest connection with that in the Department of Psychology and largely based upon it.

The University Library contains a large collection of literature on Education, Psychology, and Child Hygiene.

COURSES IN EDUCATION AND SCHOOL HYGIENE

28. THE TEACHING PROFESSION. The evolution of the teacher's calling. The teaching body as a social group in relation to other economic and social groups. The social function of the teacher. Characteristics of the teaching body as a social group. The teacher and the parent. The teacher and the artisan. The teacher in the countries of antiquity, in China, India, Greece, Rome, etc. The medieval teacher. The teachers of the early Renaissance. The great schoolmasters of the Reformation. The reformers, Comenius, F. A. Wolfe, Pestalozzi, et al. The teaching profession in Germany. Fundamental principles concerning the training of teachers. The normal schools. The hygiene of teaching.

One hour (or two, with prescribed reading), through the year.

PROFESSOR BURNHAM

34. HIGHER EDUCATION IN THE UNITED STATES. After an historical survey of the influences which have molded higher education in this country, the demands of the present day upon institutions of higher learning will be analyzed and methods of meeting them considered. Especial attention will be given to the distinguishing characteristics of college and university students and the needs peculiar to their stages of development.

One lecture and one conference period per week, through the year.

PROFESSOR SANFORD

37. THE HYGIENE OF INSTRUCTION AND THE PRINCIPLES OF MENTAL HYGIENE. The topics considered include: The significance of stimulation in the development of the nervous system, the development of associated stimuli and conditioned reflexes. The conditions of efficient brain activity. The general principles of mental hygiene. The effects of drug stimuli, alcohol, tobacco, caffeine, and the like. Fatigue. The period of study. Recesses. The optimum conditions of school work. The hygienic aspects of examinations, discipline, and punishment. The relations of discipline to mental hygiene. The hygiene of different subjects of school instruction.

One hour per week, through the year. PROFESSOR BURNHAM

39. SEMINAR. The work is determined largely by the needs of the students who take this course. It is expected that each member of the seminar will elect some subject for special investigation, either in the field of Education or School Hygiene. A coöperative method is used so that each student may profit by the work of all of the others.

One and a half or two hours per week, through the year. Th.,3.

PROFESSOR BURNHAM

See also PSYCHOLOGY 201, EDUCATIONAL PSYCHOLOGY AND GEOGRAPHY 20b, 200 and 399, GEOGRAPHY IN EDUCATION.

Biology, Chemistry and Physics

W. H. COLE, PH.D., Professor of Biology

ROBERT H. GODDARD, PH.D., Professor of Physics

BENJAMIN S. MERIGOLD, PH.D., Professor of Chemistry

PERCY M. ROOPE, A.M., Instructor in Physics

GEORGE F. WHITE, PH.D., Professor of Organic Chemistry

—————, —————, Instructor in Biology.

Graduate work in the natural sciences other than Physiography and Climatology (for which see Geography), is at present limited to the three departments named. Programs of work leading to the degree of Doctor of Philosophy are not offered. A limited number of candidates for the degree of Master of Arts are accepted.

Scholarships are available in these as in other departments, for students of better than average ability.

In addition to the formal courses announced much of the work of candidates for advanced degrees in these departments will be carried out in close personal coöperation with the members of the staff in the pursuit of their own researches.

COURSES IN BIOLOGY

For 1924-25, work on Special Problems and such other course work as may be prescribed will be conducted with graduate students by Professor Cole. Credit will be given for work done in the regular courses offered at Woods Hole, Mass., during the summer, the amount of credit to be determined in individual cases. The Special Problem courses are to be of an advanced nature planned in accordance with the preparation and abilities of the individual students.

COURSES IN CHEMISTRY

213a. ADVANCED ANALYTICAL CHEMISTRY. Special features of analytical chemistry, both practical and theoretical, including such topics as special analytical methods with particular reference to sources of error, limits of accuracy, and theoretical considerations; preparation of pure inorganic materials and methods of exact analysis required in atomic work and fields of research necessitating precise analysis. Particular attention is paid to

results of recent investigation in this field. Open only to students who take, or have taken Advanced Quantitative Analysis and Physical Chemistry.

Three hours, first semester. F., 2. PROFESSOR MERIGOLD

214. (Numbered 16 in 1923-24.) ADVANCED QUANTITATIVE ANALYSIS (including Gas Analysis). Open only to students who have taken course 14. This course is primarily intended for those who expect to specialize in Chemistry, and may also be taken with advantage by those who intend to study Medicine. The laboratory work will be varied, if desired, to meet the needs of individual students. Occasional lectures treat the subjects systematically from both practical and theoretical standpoints. Laboratory work, nine hours per week.

Three hours, through the year. Tu., 3. PROFESSOR MERIGOLD

215. ADVANCED ORGANIC SYNTHESIS. In this laboratory course, newer methods of preparation are studied, and an original investigation is initiated.

Three hours, through the year. M., Th., 2.

PROFESSOR WHITE

312. ADVANCED ORGANIC CHEMISTRY. Conferences are held at which the fundamental conceptions and problems of organic chemistry are dealt with in a systematic manner. Current literature, applicable to the subjects under discussion, is reviewed.

Once a week, through the year. W., 9. PROFESSOR WHITE

314. RESEARCH CONFERENCE. The work in progress in the laboratory is discussed in detail. Reports are expected to be made by all students engaged in research at least twice a year, and perhaps oftener.

Once a week, through the year.

THE STAFF OF THE DEPARTMENT

COURSES IN PHYSICS

22. ELEMENTARY THEORETICAL MECHANICS. Systematic presentation of theory by lectures and recitations together with the solution of problems. Mathematics 12 must be taken before or with this course. The text books are Horace Lamb's *Statics and Dynamics* and Slocumb's *Theory and Practice of Mechanics*.

Three hours, through the year, M. W. F., 8.

To be omitted in 1924-25.

PROFESSOR GODDARD

23. ELEMENTARY THEORY OF ELECTRICITY AND MAGNETISM. Systematic presentation of elementary theory by lectures and recitations, together with the solution of problems, including the general principles of dynamo and motor design, and the solution of branched alternating current circuits. This course is of especial importance to those intending to specialize in Physics, Mathematics, or Engineering. Mathematics 12 must be taken before or with this course. A knowledge of the more important differential equations is advised. Starling, *Electricity and Magnetism*.

Three hours, through the year.

PROFESSOR GODDARD

24. DYNAMICS. General principles, equations of Lagrange and Hamilton, methods of Hamilton and Jacobi, systems of particles. This course is fundamental and includes a detailed account of the principles of Least Action and the differential equations of Lagrange, preparatory to their application to other parts of Mathematical Physics, such as optics and electricity.

Newtonian and Logarithmic Potential Functions, Attraction of Ellipsoids. This subject is a necessary preliminary to the study of electricity and magnetism, of hydrodynamics, and of the figure of the earth.

Motion of Rigid Bodies and the Theory of Moving Axes. The subject of gyroscopes and rotating bodies is given together with applications.

PROFESSOR GODDARD

219. HISTORY OF PHYSICS. A conference course on the history of the various branches of Physics. Open to seniors *majoring* in Physics and to others by special permission.

Three hours, either semester or through the year.

PROFESSOR GODDARD

310. SEMINAR AND RESEARCH CONFERENCE. A Seminar on modern theories of Physics, together with conferences on current literature and on the researches in progress.

Once a week, through the year.

PROFESSOR GODDARD AND STAFF

Clark University Bulletin

NUMBER 31

MAY, 1924

ESTABROOK HALL

The new dormitory which is under construction at Clark University has been named in honor of Mr. Arthur F. Estabrook, who was a trustee of Clark University from 1904 until his death in 1919, and who left a bequest to the University of \$100,000. This is the first hall at the University to receive a distinct name, and it will serve as a permanent memorial to one of the best friends of the University.

Mr. Estabrook was born in Boston in 1847, and was senior member of the firm of Estabrook and Company, bankers, at 15 State Street, Boston. He was vice-president of the New England Conservatory of Music and of the Massachusetts Horticultural Society, and was a trustee of the American Academy of Political and Social Science and a life member of the Metropolitan Museum of Art and of the American Museum of Natural History of New York. His residence was at Swampscott, Massachusetts, and he had a winter home in Porto Rico. Mr. Estabrook was very much interested in the education of young people. He had no children of his own, but he had helped a great many boys and girls through college, and was always generous in responding to any call that was made upon him in behalf of a worthy student. He did a good deal of this at Clark during his lifetime by establishing the Estabrook Fund, which enabled many young men to stay in college who would otherwise have been obliged to leave for lack of means.

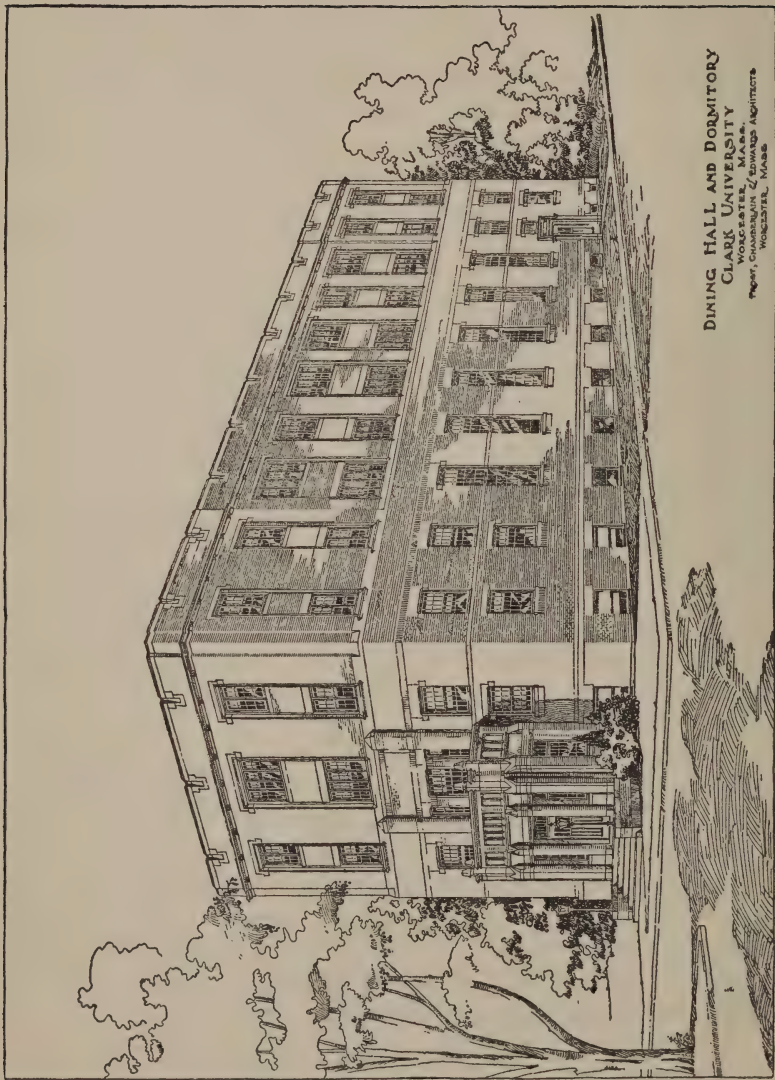
Clark College has never had a dormitory, but a number of fraternity houses have partially served that purpose. However, it is most fortunate and appropriate that the University should now have a building which will serve as a home for the young men during their first year, at least, in attendance at the College. The rooms will be assigned to freshmen in the order of application, and if there is any remaining space other undergraduate students will be shown preference in the order in which their applications are received.

NEW ATHLETIC FIELD

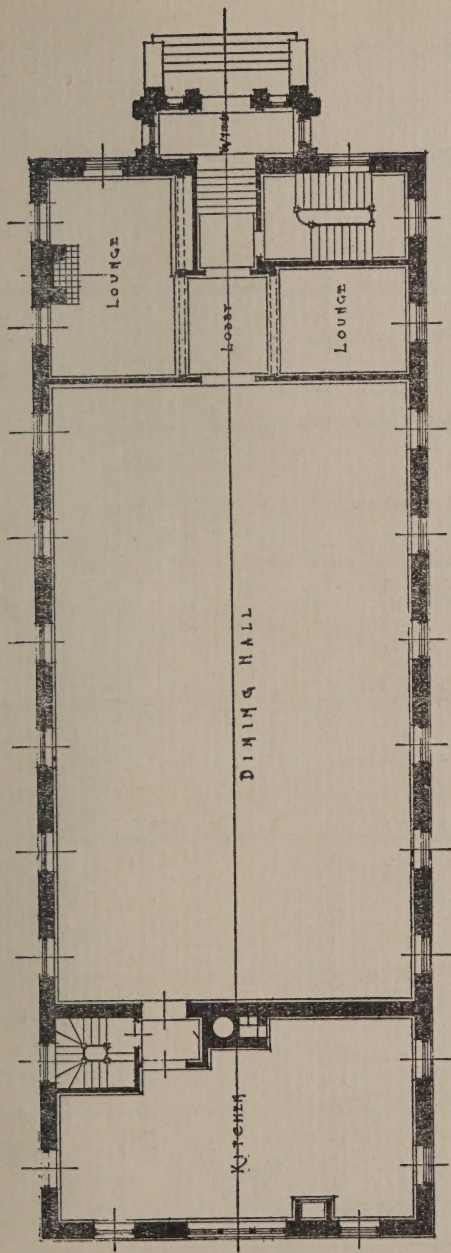
Plans are being perfected for the improvement of the field so that it will be ready for use at the opening of college in the fall.

The Bulletin is published in January, February, March, April, May, October, November, and December

Entered as second-class matter December 29, 1920, at the Post Office at Worcester, Mass., under the Act of August 24, 1912. Acceptance for mailing at special rate of postage provided for in section 1103, Act of October 3, 1917, authorized January 24, 1921.



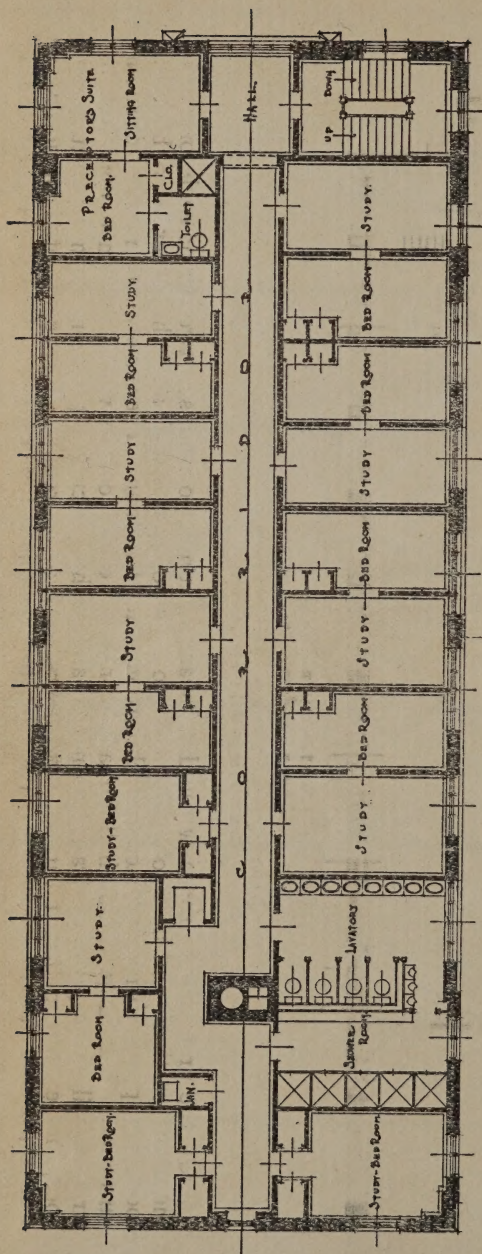
DINING HALL AND DORMITORY
CLARK UNIVERSITY
WORCESTER, MASS.
PERRY, CHANDLER & EDWARDS ARCHTTS
WORCESTER, MASS.



FIRST FLOOR PLAN
DINING HALL AND DORMITORY
CLARK UNIVERSITY

On the first floor of the new building near the entrance there will be a lounge or common room, equipped with a fireplace and club-room furniture. The large dining-hall already constructed will occupy the central portion of that floor, and extend in height through two floors. The third and fourth floors are divided into studies and bedrooms. Provision is made for

a number of suites of two rooms each, one to be used as a study and the other as a bedroom for two men. There are also a number of rooms on each floor in which two men may live together, occupying a room both as a study and as a bedroom. The completed structure is promised for occupancy by October first of this year.



THIRD FLOOR PLAN
 SCALE 1/8" = 1'-0"
 DINING HALL AND DORMITORY
 CLARK UNIVERSITY

This dormitory will be assigned primarily to freshmen students, and by action of the Collegiate Board all freshmen who are living away from home while attending the College and not excused by special action of the Collegiate Board shall be required to live in this dormitory during their first year. The rent for the rooms has been placed at a very modest figure, much less than rooms of similar equipment and attractiveness can be secured for in the neighborhood of the College. A preceptor or proctor will live in the building with the college men and have general supervision over the life in the dormitory.

